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THE ABRIDGMENT.

MESSAGE

FROM THE

PRESIDENT OF THE UNITED STATES

TO THE

TWO HOUSES OF CONGRESS

AT THE BEGINNING OF THE

FIRST SESSION OF THE FIFTY-SEVENTH CONGRESS,

WITH THE

REPORTS OF THE HEADS OF DEPARTMENTS

AND

SELECTIONS FROM ACCOMPANYING DOCUMENTS.

VOLUME II.

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REPORT

OF THE

SECRETARY OF THE NAVY.

NAVY DEPARTMENT,
Washington, D. C., November 4, 1901.

The PRESIDENT:

SIR: I have the honor to make the following report of the Navy Department for the past year:

It is accompanied by the reports of the Assistant Secretary and of the various Bureaus. These have all been prepared with painstaking regard to the needs of the service, and I particularly commend them to your consideration and that of Congress. Such of their various suggestions as in the interest of brevity I have not referred to should not be regarded as less entitled to careful attention. Where desirable legislation is recommended by them, bills will be prepared embodying it and sent to Congress for its consideration.

OPERATIONS OF THE SQUADRONS.

ASIATIC SQUADRON.

The vessels of this squadron, detailed for service in Philippine waters, have been employed in cooperating with our military forces, in maintaining an effective patrol of the various islands, and in preventing the insurgents from receiving supplies of arms. Since the capture of Aguinaldo, in which operation the U. S. S. *Vicksburg* took a conspicuous part, the Department has reduced its force on this station.

The vessels in Chinese waters have kept in touch with the important ports on the China coast and with our forces operating on shore, until the evacuation of the Chinese capital by all but a legation guard, since which time they have been so distributed as to readily cooperate in case of an emergency.

The efficiency of the squadron in Asiatic waters reflects credit upon the commander in chief and his squadron commanders.

On the 15th of July, 1901, in the presence of Rear-Admiral Rodgers, U. S. N., second in command of the Asiatic station, of Rear-Admiral

Beardslee, U. S. N., retired, and other naval officers, and of a large number of distinguished Japanese officials, a monument was unveiled and dedicated at Kurihama, Uraga, Japan, marking the landing place of Commodore Perry on his historic visit to that country in July, 1853.

NORTH ATLANTIC SQUADRON.

In the operations of this squadron the instruction of officers and men has received more attention during the last year than ever before. In addition to the usual evolutionary cruises along the Atlantic coast and in West Indian waters, several of the smaller vessels have done important surveying work, and also been on hand to protect American interests along the South and Central American coasts. During the summer, fleet evolutions were had in Nantucket and Vineyard sounds, and practical experiments carried on to determine the facility with which naval guns up to 5-inch caliber can be landed. Shore fortifications for both gun and torpedo work were erected with the resources of the squadron, and practical experiments in the matter of attack and defense conducted on sea and on shore.

SOUTH ATLANTIC SQUADRON.

The vessels of this squadron have cruised along the entire South Atlantic seaboard, in harmony with our commercial interests there.

EUROPEAN SQUADRON.

In order to reestablish this station, one vessel was withdrawn from the South Atlantic Squadron, and two vessels were withdrawn from the Asiatic Squadron. They are now cruising in the Mediterranean.

PACIFIC SQUADRON.

The vessels on this station have been in active service, and have visited the important points on the Pacific coast. On account of the great length of coast line, the necessity for protecting our interests in sections where conditions are frequently unsettled, and the few vessels available for this station, they have been compelled to drill singly instead of in squadron.

APPRENTICE AND TRAINING SQUADRONS.

The vessels of the Apprentice Squadron have made the usual cruises to Europe and the West Indies, with beneficial results. The method referred to in my last report of training landsmen who come from various parts of the United States, has proved so far successful that the Department has increased the facilities for this work. The train-

ing vessels are kept cruising continuously, except for the short periods necessary for repairs and for supplies.

NAVAL PERSONNEL.

LINE OFFICERS.

The need of line officers for sea duty becomes steadily more pressing, and in case it should become necessary to man all the vessels of our present fleet the required number is not available, and I recommend that the number of lieutenants be increased from 300 to 350, and that the limit of the number of junior lieutenants and ensigns be made 600.

NAVAL CONSTRUCTORS.

I concur with the chief naval constructor that there should be an increase in his corps. With more ships to build there must be more constructors.

CIVIL ENGINEERS.

Some increase in the corps of civil engineers is necessary in view of the great increase in yard and dock construction.

PROFESSORS OF MATHEMATICS.

As the original reason for the creation of this office has ceased to exist, I renew my recommendation that the statute authorizing appointment of professors of mathematics be so amended that, without disturbing those who now hold office, no further appointments shall be made.

ENLISTED PERSONNEL.

I can not too earnestly call attention to the necessity for an increase of this most important branch of the Navy. As with the officers so with the enlisted men. The ships of the Navy have been greatly increased in number, but commensurate steps have not been taken to provide the necessary crews for them. I recommend that the present enlisted force be increased by 3,000 men.

MARINE CORPS.

I recommend that the Marine Corps be increased by 750 men, as recommended by the General Board.

VICE-ADMIRAL.

I renew my recommendation that the office of Vice-Admiral be revived.

The following tables are presented, showing, in a concise form, a comparison of our own personnel with that of the other principal naval powers:

TABLES SHOWING INCREASE OF PERSONNEL IN DIFFERENT NAVIES DURING RECENT YEARS.

TABLE I.—*Number of commissioned officers of the executive branch.*

Nation.	1896.	1897.	1898.	1899.	1900.	1901.
England	1,728	1,768	1,804	1,897	1,970	2,085
France	1,612	1,707	1,695	1,662	1,663	1,663
Germany	723	749	785	826	90[illegible]	974
Russia	859	1,089	1,002	1,023	1,09[illegible]	1,096
Japan	.....	.....	619	700	724	.....
Italy	586	586	720	748	768	.....

The numbers on the United States Navy lists, including the former engineer officers (165 in 1900 and 155 in 1901) are:

1896	715	1899	704
1897	712	1900	717
1898	712	1901	728

TABLE II.—*Total strength of all ranks and ratings.*

Nation.	1895.	1896.	1897.	1898.	1899.	1900.	1901.
England	88,500	93,750	100,050	106,390	110,640	114,880	118,625
France	.....	45,113	45,461	43,783	44,620	49,775	.....
Germany	21,487	21,485	23,302	24,906	26,651	30,386	.....
Russia	40,372	40,500	40,184	42,500	39,546	39,546	.....
Japan	13,839	23,000	23,000	23,000	23,000	26,108	.....
Italy	24,203	24,200	24,200	25,669	24,560	25,804	.....
United States	13,460	13,460	13,218	12,218	20,275	23,453	.....

In the above table the English figures include the royal marines. The French marine infantry is not included. The United States figures do not include marines.

The Russian naval estimates for 1899 proposed increasing the total force to 52,250 in 1900, and to 57,500 in 1901.

England increases her naval personnel by making provision in the estimates of each year for a sufficient future increase in officers and men to man the new ships.

France has proposed this year to add to her personnel: 150 lieutenant-commanders, 116 lieutenants, 101 ensigns and cadets, and 170 engineers. This increase is to be made at the rate of 63 line officers and 28 engineers per year. France also proposes to increase her enlisted force at the rate of 2,320 men yearly.

Germany provides for the future increase of the naval personnel in a systematic manner under the law governing her shipbuilding policy. This increase is fixed by law, as follows:

Year.	Line officers.	Other personnel.	Total.
1900	876	22,476	23,352
1905	1,179	31,187	32,366
1910	1,482	39,898	41,380
1915	1,785	48,609	50,394
1920	2,088	57,320	59,408
Total increase, 1900 to 1920	1,212	34,844	36,056
Average annual increase	60.6	1,742.2	1,802.8
Average increase in five years	303	8,742.2	9,014

NAVAL ACADEMY.

Favorable consideration is invited to the report of the Board of Visitors to this institution, and to its recommendations:

1. That the title of "midshipman," which is full of historic associations, be restored and substituted for "naval cadet."

2. That the probationary course for naval cadets be reduced.

Also to the report of the Chief of the Bureau of Steam Engineering, and to its recommendations:

1. That an engineering experimental laboratory be established at the Naval Academy for the use of the cadets in their studies.

2. That a post-graduate course of instruction in engineering be authorized.

Also to the reports of the Chief of the Bureau of Navigation and the Superintendent of the Naval Academy, and to their recommendations:

1. That no cadet shall hereafter be appointed whose age is under 15 or over 18 on October 1 of the year of entrance to the Naval Academy.

2. That the salaries of the civilian professors at the Naval Academy be revised.

3. That a training vessel be built for the Naval Academy sufficiently large to accommodate the entire corps of cadets.

I recommend that the number of cadets at the Naval Academy be increased 50 per cent, as recommended by the General Board, and that there be appointed annually by the President ten at large.

Upon recommendation of the Superintendent of the Naval Academy the Department decided, in the interest of the convenience of candidates for admission as well as of the Government, to have examinations for admission to this institution conducted by the Civil Service Commission at or near the homes of the candidates instead of at the Naval Academy as heretofore. The wishes of the Department were

cordially acquiesced in by the Civil Service Commission, and this new method of examination has been put in operation with successful results.

NAVAL MILITIA.

Upon requests from the governors of a few States, their respective State militias, when practicable to detail vessels for the purpose, were instructed on board regular men-of-war in the duties of the naval service. The reports of these drills and the operations, so far as known to the Department, of the other State militias, are set forth in the report of the officer in charge of this branch.

NATIONAL NAVAL RESERVE.

I have again to call attention to the pressing need of a national naval reserve force from which to draw for sea service immediately upon an outbreak of war. This subject has received attention in previous reports, and recommendations have been made for the enrollment and organization of such a national body, to be under the general direction of the Navy Department and subject to the call of the Chief Executive in times of national emergency.

The results of the Spanish-American war were such as to assure everyone having knowledge of naval matters that steps should at once be taken to meet the one certain and positive requirement which will face the nation upon an outbreak of war—the immediate necessity at that exigent time, if it comes, of a large increase in the men of the Navy from an existing reserve—an increase which must, in the main, be made from the seafaring class, who, having acquired the habit of the sea, are at home on the water. There is no better way of insuring such a reserve than by the measure now urged.

Our pressing need is for such a reserve—a body to go to the front on board ship at once upon the outbreak of war, or when it is imminent.

Next to this will come the defense of the coast, and for such purpose the Naval Militia will be essential.

I see reasons for both organizations, and have heretofore done all possible to aid the one now existing—the Naval Militia, and to convince Congress of the necessity for the authorization of the other—the national naval reserve.

PROPOSED MODIFICATION OF LAWS RELATING TO THE PERSONNEL.

Referring to the act to reorganize and increase the efficiency of the personnel of the Navy and Marine Corps of the United States, approved March 3, 1899, I call your attention to sections 8 and 9, and recommend that the provision that officers retired under these sections shall be given the rank and three-fourths the sea pay of the next higher grade be so far modified that the retirement will be with the rank and three-

fourths the sea pay of the grade held at the time of retirement. This modification is especially desirable in section 8, where the retirement is voluntary.

Section 8 offers a valuable and much-needed officer a premium to go on the retired list at the very time when the number of officers is far short of the number required by the needs of the service, and when Congress is called upon for more. Section 9, on the other hand, gives a premium to the same end to an officer whose services are no longer of value, and who receives this premium when other officers equally deserving are retired with no such benefit. I never favored these sections.

Paragraph 2 in the section "Pay of the Navy" of the last naval appropriation bill benefits only officers who served during the late war with Spain. As the object of it is to prevent retarding the promotion of any deserving officer by the advancement at any time of others over him, it should be made to apply to all officers by an amendment striking out the words "for service rendered during the war with Spain."

Some provision should be made whereby when retired officers are ordered into active service the time of their active service thereafter shall be reckoned in their favor as to rank and pay when they are again detached from active service.

I recommend that the law authorizing the retirement of petty officers and enlisted men who have served thirty years in the Navy be amended so as to include within said period of service all honorable service in the United States Navy, Marine Corps, and Army.

Under the provisions of the personnel act, approved March 3, 1899, officers of the line and medical and pay corps of the Navy receive the same pay and allowances, except forage, as officers of corresponding rank in the Army, excepting that officers of the Navy when on shore duty other than beyond seas receive 15 per cent less than when at sea.

I recommend that a change be made in the existing law, in the direction of making the pay of officers of the Army and the Marine Corps on the one hand and officers of the Navy on the other the same.

ORDNANCE.

In order to gain greater energy, guns have been increased in weight and dimensions until it is believed that they have now reached a point beyond which it is inexpedient to go. Any further increase in their efficiency must be looked for in the use of heavier projectiles, and in the development of powders possessing higher ballistic properties than those now in use.

New types of 5-inch and 7-inch guns have been made and tested with excellent results.

SMOKELESS POWDER.

The manufacture of smokeless powder has progressed satisfactorily, both at the Government works and at those of private manufacturers. The Department in June last ordered a board of naval officers and chemists to revise the specifications for the manufacture of smokeless powder, and to draw up rules for its test, examination, and storage both in magazines on shore and on shipboard, and specific instructions on these points have been issued throughout the service. In addition a general examination and chemical test were made of all smokeless powder in the naval service, and the results are satisfactory.

ARMOR.

The capacity of the armor plants is now about 7,500 tons a year of armor of the best quality; and at the instance of the Department the manufacturers are making preparations to increase their output to 10,000 or 12,000 tons a year in order to complete deliveries in accordance with present contracts and also in order to be ready to provide armor for additional vessels should they be authorized by Congress. They have already turned out more armor than was anticipated.

Under authority vested in the Department by Congress contracts were signed November 28, 1900, for over 37,000 tons of armor required for vessels authorized and building. Comparing the tests made in this country with reports of those made abroad, our armor seems to be the best that can at present be produced, and the price at which it is obtained is lower than that paid abroad. Deliveries amounting to nearly 2,000 tons have already been made under these contracts.

NAVAL MAGAZINES.

A new naval magazine is urgently required at the port of Boston, Mass., the present site in Chelsea having become practically untenable for the storage of explosives, owing to the growth and close proximity of the population.

The storage of explosives there, except in very small quantities, has been given up.

Magazine facilities are also inadequate at Portsmouth, N. H., the present building being small and within the limits of the navy-yard, which is inadvisable.

NAVAL CONSTRUCTION.

Progress upon vessels now under construction has been somewhat delayed by reason of strikes and the nondelivery of material on contract time.

The percentage of completion of vessels now under construction.

Name of vessel.	Where and by whom building.	Estimates of superintending constructors.	
		Percentage of completion Nov. 1.	Probable date of completion.
Maine	Wm. Cramp & Sons, Philadelphia, Pa	70	October 1, 1902.
Missouri	Newport News Shipbuilding and Dry Dock Co., Newport News, Va.	48	March 15, 1903.
Ohio	Union Iron Works, San Francisco, Cal	43	May 5, 1903.
Virginia	Newport News Shipbuilding and Dry Dock Co., Newport News, Va.	0	May, 1904.
Nebraska	Moran Bros.' Co., Seattle, Wash	0	July 1, 1904.
Georgia	Bath Iron Works, Bath, Me	2	Do.
New Jersey	Fore River Ship and Engine Co., Quincy, Mass.	2	Do.
Rhode Island	do	2	Do.
Pennsylvania	Wm. Cramp & Sons, Philadelphia, Pa	6	January 10, 1904.
West Virginia	Newport News Shipbuilding and Dry Dock Co., Newport News, Va.	2	February, 1904.
California	Union Iron Works, San Francisco, Cal	0	August 10, 1904.
Colorado	Wm. Cramp & Sons, Philadelphia, Pa	9	January 10, 1904.
Maryland	Newport News Shipbuilding and Dry Dock Co., Newport News, Va.	2	February, 1904.
South Dakota	Union Iron Works, San Francisco, Cal	0	August 10, 1904.
Denver	Neafie & Levy, Philadelphia, Pa	58	November 1, 1902.
Des Moines	Fore River Ship and Engine Co., Quincy, Mass.	57	Do.
Chattanooga	Lewis Nixon, Elizabeth, N. J	48	February 1, 1903.
Galveston	Wm. R. Trigg Co., Richmond, Va	43	March 1, 1903.
Tacoma	Union Iron Works, San Francisco, Cal	20	February 14, 1903.
Cleveland	Bath Iron Works, Bath, Me	68	August 15, 1902.
St. Louis	Neafie & Levy, Philadelphia, Pa	0	September 9, 1904.
Milwaukee	Union Iron Works, San Francisco, Cal	0	September 17, 1904.
Charleston	Newport News Shipbuilding and Dry Dock Co., Newport News, Va.	0	April, 1904.
Arkansas	do	75	June 11, 1902.
Nevada	Bath Iron Works, Bath, Me	91	February 1, 1902.
Florida	Lewis Nixon, Elizabeth, N. J	74	June 1, 1902.
Wyoming	Union Iron Works, San Francisco, Cal	75	April 5, 1902.
Bainbridge	Neafie & Levy, Philadelphia, Pa	99	December 1, 1901.
Barry	Neafie & Levy, Philadelphia, Pa	92	February 1, 1902.
Chauncey	do	96	January 1, 1902.
Dale	Wm. R. Trigg Co., Richmond, Va	97	February 25, 1902.
Decatur	do	98	January 25, 1902.
Hopkins	Harlan & Hollingsworth Co., Wilmington, Del.	76	March 1, 1902.
Hull	do	75	April 1, 1902.
Lawrence	Fore River Ship and Engine Co., Quincy, Mass.	99	December 1, 1901.
Macdonough	Fore River Ship and Engine Co., Quincy, Mass.	98	January 1, 1902.
Paul Jones	Union Iron Works, San Francisco, Cal	85	February 7, 1902.
Perry	do	89	February 28, 1902.
Preble	do	87	March 19, 1902.
Stewart	Gas Engine and Power Co. and Chas. L. Seabury & Co., Consolidated, Morris Heights, N. Y.	63	June, 1902.
Truxtun	Maryland Steel Co., Sparrow's Point, Md	78	April 1, 1902.
Whipple	do	77	Do.
Worden	do	76	Do.
Stringham	Harlan & Hollingsworth Co., Wilmington, Del.	98	December, 1901.
Goldsborough	Wolff & Zwicker Iron Works, Portland, Oreg	95	January 1, 1902.

The percentage of completion of vessels now under construction—Continued.

Name of vessel.	Where and by whom building.	Estimates of superintending constructors.	
		Percentage of completion Nov. 1.	Probable date of completion.
Blakely	George Lawley & Son, Corporation, South Boston, Mass.	98	December, 1901.
De Long	do	98	Do.
Nicholson	Lewis Nixon, Elizabeth, N. J	97	January 1, 1902.
O'Brien	do	98	December 15, 1901.
Thornton	Wm. R. Trigg Co., Richmond, Va	97	January 1, 1902.
Tingey	Columbian Iron Works, Baltimore, Md	70	April 15, 1902.
Wilkes	Gas Engine & Power Co., and Chas. L. Seabury & Co., Consolidated, Morris Heights, N. Y.	90	February, 1902.
Plunger	Holland Torpedo Boat Co. (Lewis Nixon)	45	No estimate.
Adder	do	92	February 1, 1902.
Grampus	Holland Torpedo Boat Co. (Union Iron Works)	51	January 17, 1902.
Moccasin	Holland Torpedo Boat Co. (Lewis Nixon)	85	February 20, 1902.
Pike	Holland Torpedo Boat Co. (Union Iron Works)	50	January 30, 1902.
Porpoise	Holland Torpedo Boat Co. (Lewis Nixon)	80	April 1, 1902.
Shark	do	74	May 1, 1902.

Vessels finally or conditionally accepted since date of last report.

Name of vessel.	Type.	Date of trial.	Speed required by contract.	Speed obtained on trial.	Date of preliminary acceptance.	Date of final acceptance.	By whom built.
		1900.	*Knots.*	*Knots.*	1900.	1901.	
Alabama	Battleship	Aug. 28	16	17.013	Oct. 22	Aug. 24	Wm. Cramp & Sons.
					1901.		
Wisconsin	do	Oct. 11	16	17.174	Jan. 17	(1)	Union Iron Works.
Stockton	Torpedo boat.	Nov. 28	26	25.79	Jan. 18	(2)	Wm. R. Trigg Company.
		1901.					
Bailey	do	Apr. 25	30	30.198	May 29	(3)	Gas Engine and Power Co., etc.
Barney	do	May 15	28	29.04	May 31	(3)	Bath Iron Works.
Shubrick	do	Apr. 5	26	26.07	do	(3)	Wm. R. Trigg Co.
Bagley	do	May 16	28	29.15	June 12	(3)	Bath Iron Works.
Biddle	do	July 2	28	28.57	Aug. 5	(3)	Do.

[1] Final trial June 14, 1901; no final acceptance. [2] Final trial June 17, 1901; no final acceptance
[3] No final trial nor acceptance.

The following vessels have been dropped from the Navy:

Name.	Type.	Status.	Disposition.
Yosemite	Iron single-screw steamer.	Auxiliary Navy	Foundered off Guam, November 13, 1900.
Belusan	Gunboat	Regular Navy	Stricken from Navy Register, February 11, 1901. Purchased by the War Department.

CONTRACTS FOR VESSELS.

Contract dated August 25, 1900, for six submarine torpedo boats, and contract dated November 19, 1900, for one submarine boat, authorized by the act of June 10, 1896, as amended by the act of March 3, 1899, to be completed within eleven months from date of contract, were awarded to the Holland Torpedo Boat Company, of New York, at $170,000 each.

Contracts for the construction of the six armored cruisers authorized by the acts of March 3, 1899, and June 7, 1900, to be completed within thirty-six months from date of contract, were awarded to the following shipbuilding firms, viz:

Cruiser No. 4, *Pennsylvania* (sheathed), to the William Cramp & Sons Ship and Engine Building Company, Philadelphia, Pa. (contract dated January 10, 1901), at $3,890,000; speed, 22 knots.

Cruiser No. 5, *West Virginia* (sheathed), to the Newport News Shipbuilding and Dry Dock Company, Newport News, Va. (contract dated January 24, 1901), at $3,885,000; speed, 22 knots.

Cruiser No. 6, *California* (sheathed), to Union Iron Works, San Francisco, Cal. (contract dated January 10, 1901), at $3,800,000; speed, 22 knots.

Cruiser No. 7, *Colorado* (unsheathed), to the William Cramp & Sons Ship and Engine Building Company, Philadelphia, Pa. (contract dated January 10, 1901), at $3,780,000; speed, 22 knots.

Cruiser No. 8, *Maryland* (unsheathed), to the Newport News Shipbuilding and Dry Dock Company, Newport News, Va. (contract dated January 24, 1901), at $3,775,000; speed, 22 knots.

Cruiser No. 9, *South Dakota* (unsheathed), to the Union Iron Works, San Francisco, Cal. (contract dated January 10, 1901), at $3,750,000; speed, 22 knots.

Contracts for the construction of the five battle ships authorized by the acts of March 3, 1899, and June 7, 1900, to be completed within thirty-six months from date of contract, were awarded to the following shipbuilding firms, viz:

Battle ship No. 13, *Virginia* (sheathed), to the Newport News Shipbuilding and Dry Dock Company, Newport News, Va. (contract dated February 15, 1901), at $3,590,000; speed, 19 knots.

Battle ship No. 14, *Nebraska* (sheathed), to Moran Brothers Company, Seattle, Wash. (contract dated March 7, 1901), at $3,733,600; speed, 19 knots.

Battle ship No. 15, *Georgia* (sheathed), Bath Iron Works, Bath, Me. (contract dated February 18, 1901), at $3,590,000; speed, 19 knots.

Battle ship No. 16, *New Jersey* (unsheathed), to Fore River Ship and Engine Company, Weymouth, Mass. (contract dated February 15, 1901), at $3,405,000; speed, 19 knots.

Battle ship No. 17, *Rhode Island* (unsheathed), to Fore River Ship and Engine Company, Weymouth, Mass. (contract dated February 15, 1901), at $3,405,000; speed, 19 knots.

Contracts for the construction of the three protected cruisers authorized by the act of June 7, 1900, to be completed within thirty-six months from date of contract, were awarded to the following shipbuilding firms, viz:

Protected Cruiser No. 20, *St. Louis*, to the Neafie & Levy Ship and Engine Building Company, Philadelphia, Pa. (contract dated March 11, 1901), at $2,740,000; speed 22 knots.

Protected Cruiser No. 21, *Milwaukee*, to Union Iron Works (contract dated April 17, 1901), at $2,825,000; speed 22 knots.

Protected Cruiser No. 22, *Charleston*, to Newport News Shipbuilding and Dry Dock Company, Newport News, Va. (contract dated March 30, 1901), at $2,740,000; speed 22 knots.

NAVAL CONSTRUCTION ABROAD.

Laid down in 1901.

Nation.	Battle ships.	Cruisers.	Torpedo vessels.	Total.
	Tons.	*Tons.*	*Tons.*	*Tons.*
England	30,000	81,920	4,700	116,620
France		35,100	6,772	41,872
Germany	11,800	9,770	4,900	26,470
Italy				
Japan		6,400	5,903	12,303
Russia	19,500	31,785	3,550	54,835
United States		23,000	840	23,840

In addition to the foregoing, the following tonnage has been authorized and will be laid down during the current fiscal year:

Nation.	Battle ships.	Cruisers.	Torpedo vessels.	Total.
	Tons.	*Tons.*	*Tons.*	*Tons.*
England	49,500	72,760	4,400	126,660
France	29,730	12,550	5,980	48,260
Germany	26,000	17,270	4,200	47,470
Italy	25,250			25,250
Japan				
Russia	13,500	23,500	2,100	39,100
United States				

It will be noticed that England and France will lay down about the same amount in the next year as in the past. Germany is following a building programme which will provide a strong navy in 1908, and

under the law authorizing this programme its Government can replace a lost vessel by another of the same class, and can also replace vessels of a certain age by new ones, this age being for battle ships twenty-five years, and for cruisers from fifteen to twenty years. Japan has a further extension of her navy under discussion, while Russia progresses steadily with hers.

STEAM ENGINEERING.

Attention is invited to the report of the Engineer in Chief:

1. To the details of the trials of the machinery of the battle ships *Wisconsin* and *Illinois*, and of the trial trips of the torpedo boats *Stockton*, *Shubrick*, *Bagley*, *Barney*, *Biddle*, and *Bailey*.

2. To the reports of the inspection of material and the excellent results thereof.

3. To the recommendations in regard to an efficient engineering personnel, both official and enlisted.

4. To the recommendations in regard to increased rank for warrant machinists after a certain number of years' service.

EQUIPMENT.

The varied duties of this Bureau are shown in the detailed report of its Chief

COAL.

Owing to the unusually large demands made upon our naval vessels, especially in the waters of the Philippines and northern China, the quantity of coal used during the last year was greater than any year heretofore. While the best American coal was advanced more than 50 per cent on April 1, 1900, it is gratifying to state that the average cost to the Navy during the past year only increased about 13 per cent over that for the previous year.

American coal from the Atlantic coast of the United States has been sent by the Bureau to distant ports of the world, notably Yokohama, Japan, and Pichilinque Bay, Mexico, wherever suitable storage can be obtained for it. In the Philippines American coal is now supplied almost to the entire exclusion of other coal, and when other than American coal from the Atlantic coast has been supplied to our coal depots at insular and foreign ports it is due to exceptional circumstances making such action necessary.

The yearly arrangement for the supply of coal to our ships in foreign ports has been continued, with much advantage as to economy and certainty of supply. Fifty-three ports are now covered by it.

In the transportation of coal, it has been impossible in some cases to obtain all the merchant tonnage needed to insure the needed coal supply. This difficulty has been overcome by the employment of navy colliers manned by merchant crews, of which there are now nine in commission. Three of these vessels have been of great use to the commander in chief of the Asiatic Station for distributing coal from Manila to various ports in the Philippines and the China Sea for ships of his fleet.

COAL DEPOTS.

Attention is invited to that portion of the report dealing with the establishment and construction of coal depots. This work has been pushed forward during the past year, but much yet remains to be done to thoroughly establish ourselves in this respect, and for which ample appropriation should be made.

OCEAN AND LAKE SURVEYS.

The officers and crews of 19 vessels have been employed in hydrographic work in all parts of the world in which we have possessions, the results of which, as embodied in hydrographic charts, sailing directions, and other aids to mariners, will prove of great benefit to our maritime interests. These interests are of such great importance that I commend to favorable consideration the recommendation of the chief of this Bureau looking to the construction of a suitable building for use as a hydrographic office.

ELECTRICAL APPLIANCES.

Attention is invited to that part of the report of the Chief of the Bureau of Equipment relating to electrical appliances on board ship, and to the necessity for a separate corps of warrant officers of the electrician class.

WIRELESS TELEGRAPHY.

During the past year particular attention has been given to the practical development of wireless telegraphy, in continuation of the trials mentioned in my last report. The Bureau is studying the many systems of wireless telegraphy now in evidence with a view to the adoption of the most practical method.

ASSISTANT CHIEF OF BUREAU.

The volume and scope of business transacted by this Bureau justify the authorization of an assistant chief.

PUBLIC WORKS.

BUREAU OF YARDS AND DOCKS.

With the necessary enlargement of the naval establishment, due to the national expansion, the duties of this Bureau have been largely increased. During the past year much important work has been done in our navy-yards, the construction of authorized dry docks has been pushed, and preliminary steps have been taken looking to the establishment of new stations in our insular possessions. Attention is invited to the details of the annual report of the chief of this Bureau.

PROPOSED NAVAL STATION AT OLONGAPO, IN THE PHILIPPINES.

In accordance with the directions contained in the last naval appropriation act, the Department organized a commission of officers to select and report upon the best site for a naval station in the Philippines. It unanimously recommends Olongapo, in Subig Bay.

The necessity for such a station is apparent and an appropriation should be made for it. Our interests in that part of the world necessitate the presence of a large fleet in Asiatic waters at all times. While in time of peace these vessels can be docked and repaired in foreign dockyards or sent thousands of miles away to our own naval stations on the Pacific, it goes without saying that this would not be the case in time of war on our part, and even of a war in which we might be a neutral.

PROPOSED NAVAL STATION, PORTO RICO.

In accordance with the provisions of the last naval appropriation act, directing an examination of the coast of Porto Rico for the selection of a site for a naval station, a board was appointed which made an examination of the coast of Porto Rico. It recommends that the naval station be located on the shores of the harbor of San Juan, and includes in its recommendations the construction of a dry dock.

PROPOSED NAVAL STATION, HAWAIIAN ISLANDS.

The same act contains a provision appropriating $150,000 for the purchase of land for a naval station, and for harbor and channel defenses at Pearl Harbor, island of Oahu. Negotiations for the purchase of land failed, the owners refusing to entertain propositions for its sale. Under these circumstances, the Department deemed it advisable to direct the commandant of the naval station at Honolulu to take steps looking to the condemnation of a tract of land about Pearl Harbor sufficient for naval purposes. Proceedings to that end were accordingly commenced in the proper courts in July of this year.

NAVAL STATION, TUTUILA.

Estimates for the requirements of this station have been submitted.

ISLAND OF GUAM.

In accordance with the act of Congress approved June 6, 1900, a board was appointed to make a survey, plan, and estimates for the improvement of a harbor at the island of Guam, with particular reference to the improvement of the harbor of San Luis d'Apra, either by dredging a basin or by building a breakwater, and to the establishment of a naval base and coal depot.

From the report of the board it appears that a breakwater is not considered advisable on account of its great cost and the uncertainty of its resistance against storms, and because it is not necessary for the protection of the inner harbor.

The board, however, makes recommendations looking to the improvement of the harbor of San Luis d'Apra by dredging, to the establishment of a naval base and coaling station, to necessary means of defense, and to the selection of a town site.

BLYTHE ISLAND.

In pursuance of the directions contained in the naval appropriation act of March 3, 1901, requiring a report as to the condition and extent of any Government property at Blythe Island, Georgia, whether the title is good, and whether the property is adapted to the necessary wants of the Navy Department, an officer was detailed to visit the property, locate its boundaries, and lay out a rifle range, provision for which was made in the same act. It was thought at that time that it might be used for a practice ground by the naval training service, but it was decided that it was not so well adapted to that purpose as other localities, and no use of it has thus far been made.

The property is about 1,100 acres in extent, very much of which is marshy; but a tract of upland, well wooded, covers an extent of about 480 acres, and upon this portion the rifle range has been located.

There are no improvements upon the tract, no efforts in that direction having been made since the property was acquired by purchase in 1856, when $130,000 was paid for it, at the rate of about $120 per acre.

The title to these lands has been reported good by the Attorney-General of the United States.

The property can be availed of as a place for rifle practice and for drill by the training squadron when it is considered desirable to send it to those waters; but there is not thought to be any present necessity for its use.

BARRACKS FOR ENLISTED MEN.

Attention is again invited to the recommendations of the Chiefs of the Bureaus of Navigation and Yards and Docks that barracks be substituted for receiving ships for the purpose of housing the enlisted force when waiting for transfer to seagoing vessels. The old wooden receiving ships are rapidly wearing out. The necessary repairs to put them in good condition—often beyond the limit allowed by law—will involve a large expenditure of money, and does not commend itself as a measure of economy. It, of course, will be many years before any vessels of the modern Navy will become sufficiently obsolete to be utilized for this purpose.

NAVAL RENDEZVOUS.

In this connection the Department recommends the consideration of a plan for a general naval rendezvous at some suitable place, to be independent of the navy-yard and, while including commodious barracks for the whole enlisted force, devoted also to the training of enlisted men of the artificer branch of the service. The mechanical element is now one of the most important in the management of our ships; the machinery on shipboard is complicated and sometimes delicate, and the men who run it should not be green hands, but trained to that service. This would make for both economy and efficiency.

In such a rendezvous the enlisted men should be made familiar with all the mechanical appliances with which they would have to do on shipboard. There is no reason why boilers should not be set up on shore at such a rendezvous, engines run, and all the other appliances of naval machinery typically represented. Such a station would serve for the assembling, recruiting and drilling of the enlisted force from which the crews for vessels would be drafted as required. When supplemented with the necessary drill ships assigned from the regular service, it would form for the artificer branch a training station corresponding to those already existing at Newport and San Francisco for the seamen branch, and to that existing at Newport and Washington for the gunnery branch.

I recommend that the name of the League Island Navy-Yard be changed to "Philadelphia Navy-Yard."

SUPPLIES AND ACCOUNTS.

THE NAVY RATION.

The Department in July last ordered a board to report upon an improved ration and messing system for the Navy. The conditions

showing the need of this action are described in the annual reports of the Paymaster-General and Chief of the Bureau of Navigation.

The present ration has been substantially without change since it was established in 1861 (sec. 1580, R. S.). The board recommends legislation that will give to the crews of our ships a liberal and proper diet under all conditions of service, without compelling them to contribute to their own subsistence, as at present. The changes recommended are approved, and would make the cost of the ration about 30 cents per man per diem, which is now its nominal and commutation value. At present the actual cost of the ration is from 21 to 22 cents.

COLLIER SERVICE.

Owing to an insufficient personnel the Department is unable to man its colliers with officers and men of the Navy, and has therefore authorized the Bureau of Navigation to contract with merchant captains to supply and subsist the proper complement of officers and men, the Government paying wages of crew and all proper charges and dues incident to their navigation and the lading and discharge of cargo, and furnishing the stores necessary for the running of the ships. To provide for the preliminary outlay for mess stores, shipping crew, etc., and to meet the usual charges for harbor and port dues, pilotage, canal tolls, etc., it became necessary to place certain limited sums of money in the hands of these captains, who gave bonds to the Government for its protection.

Next to having a commissioned disbursing officer on board, this plan is the most satisfactory that could be devised.

In order, however, to meet the requirements of the Treasury officials, it is recommended that the legislation recommended by the Paymaster-General be adopted.

INSPECTION OF ACCOUNTS.

With the enlarged scale and greatly increased volume of work at the shore stations of the naval establishment, it is desirable in the interest of good administration to have a permanent inspector of accounts attached to the Secretary's office. My former recommendations on this subject are renewed.

FINANCIAL STATEMENT.

Appropriations, expenditures, and balances for the fiscal year ending June 30, 1901.

Title of appropriation.	Appropriations for fiscal year 1901, exclusive of public works.	Amounts drawn in fiscal year 1901.	Balances, June 30, 1901.
General establishment:			
Pay of the Navy	$12,810,897.00	$10,494,878.72	$2,316,018.28
Pay, miscellaneous	625,000.00	540,450.32	84,549.68
Contingent, Navy	10,000.00	6,467.64	3,532.36
Emergency fund, Navy Department	444,356.00	197,234.23	247,121.77
Bureau of Yards and Docks:			
Maintenance	475,000.00	429,655.72	45,344.28
Repairs and preservation, navy-yards	500,000.00	430,698.98	69,301.02
Civil establishment	83,439.83	82,013.72	1,426.11
Contingent	50,000.00	25,919.92	24,080.08
Bureau of Equipment:			
Equipment of vessels	3,950,000.00	2,644,758.03	1,305,241.97
Civil establishment	19,052.52	18,154.80	897.72
Contingent	27,500.00	11,327.65	16,172.35
Naval Observatory	12,500.00	12,342.02	157.98
Ocean and lake surveys	100,000.00	34,833.45	65,166.55
Bureau of Navigation:			
Pay, Naval Academy	107,085.45	106,500.00	585.45
Repairs, Naval Academy	26,000.00	21,894.16	4,105.84
Heating and lighting, Naval Academy	20,000.00	19,331.18	668.82
Special course, Naval Academy	3,000.00	2,147.55	852.45
Contingent, Naval Academy	43,800.00	38,546.59	5,253.41
Naval War College	9,200.00	8,763.56	436.44
Naval Training Station, Rhode Island	45,000.00	44,942.44	57.56
Naval training station, California	37,494.32	31,280.49	6,213.83
Gunnery exercises	12,000.00	8,691.31	3,308.69
Transportation, recruiting, and contingent	140,000.00	94,397.43	45,602.57
Outfit for naval apprentices	112,500.00		112,500.00
Outfits for landsmen	112,500.00	45.00	112,455.00
Naval Home, Philadelphia, Pa	76,425.00	60,862.31	15,562.69
Bureau of Ordnance:			
Ordnance and ordnance stores	1,525,000.00	689,413.38	835,586.62
Repair	30,000.00	23,634.46	6,365.54
Civil establishment	32,624.00	32,297.68	326.32
Contingent	70,000.00	22,761.30	47,238.70
Torpedo station	65,000.00	57,511.31	7,488.69
Bureau of Construction and Repair:			
Construction and repair	7,500,000.00	6,485,049.88	1,014,950.12
Civil establishment	25,824.25	25,538.05	286.20
Bureau of Steam Engineering:			
Steam machinery	3,160,000.00	2,449,170.47	710,829.53
Civil establishment	13,300.00	13,293.06	6.94
Contingent	1,000.00	888.27	111.73
Bureau of Supplies and Accounts:			
Provisions, Navy	2,500,000.00	2,290,541.48	209,458.52
Civil establishment	81,232.03	76,700.66	4,531.37
Contingent	150,000.00	94,404.38	55,595.62
Bureau of Medicine and Surgery:			
Medical department	115,000.00	106,133.97	8,866.03
Repairs	20,000.00	9,332.37	10,667.63
Contingent	30,000.00	26,732.80	3,267.20
Naval hospital fund	40,000.00	40,000.00	

Appropriations, expenditures, and balances for the fiscal year ending June 30, 1901—Cont'd.

Title of appropriation.	Appropriations for fiscal year 1901, exclusive of public works.	Amounts drawn in fiscal year 1901.	Balances, June 30, 1901.
Marine Corps:			
Pay	$1,694,054.23	$1,239,343.93	$454,710.30
Clothing	290,199.54	289,157.54	1,042.00
Provisions	371,071.50	177,109.01	193,962.49
Fuel	30,000.00	23,927.97	6,072.03
Repairs of barracks	81,300.00	47,296.69	34,003.31
Military stores	68,853.00	51,487.47	17,365.53
Transportation and recruiting	55,000.00	41,470.60	13,529.40
Forage	6,000.00	1,326.31	4,673.69
Hire of quarters	14,748.00	13,094.93	1,653.07
Contingent	90,450.00	76,500.42	13,949.58
Total	37,913,406.67	29,770,255.61	8,143,151.06

Comparative statement of estimates and appropriations, 1902–1903.

Naval establishment.	Appropriated 1902.	Estimates 1903.	Increase of estimates for 1903 over amount appropriated for 1902 for same purpose.	Decrease of estimates for 1903 as compared with amount appropriated for 1902 for same purpose.	New items, 1903.
Pay of the Navy	$15,200,284.00	$16,498,199.00	$1,297,915.00	.....	.....
Pay, miscellaneous	600,000.00	600,000.00	.....	.....	.....
Contingent, Navy	10,000.00	10,000.00	.....	.....	.....
Emergency fund	250,000.00	300,000.00	50,000.00	.....	.....
Bureau of Navigation	696,625.00	1,336,271.25	639,646.25	.....	$184,646.25
Bureau of Ordnance	2,583,455.75	3,444,706.75	1,303,100.00	$441,849.00	1,002,400.00
Bureau of Equipment	4,014,802.52	4,668,002.52	653,200.00	.....	3,200.00
Bureau of Yards and Docks	654,879.08	784,204.08	129,325.00	.....	29,030.00
Public works—Bureau of Yards and Docks	6,775,010.00	20,781,375.00	17,947,375.00	3,941,010.00	16,638,375.00
Public works—Bureau of Navigation:					
Naval Academy	3,000,000.00	1,500,000.00	.....	1,500,000.00	.....
Naval training station, Port Royal	.....	159,750.00	159,750.00	.....	159,750.00
Naval training station, California	6,000.00	31,500.00	31,500.00	6,000.00	31,500.00
Naval training station, Rhode Island	52,170.00	114,280.00	114,280.00	52,170.00	114,280.00
Naval War College	.....	60,000.00	60,000.00	.....	60,000.00
Public works—Bureau of Ordnance	318,100.00	1,457,300.00	1,265,700.00	126,500.00	1,164,500.00
Public works—Bureau of Equipment:					
Depots for coal	750,000.00	640,000.00	.....	110,000.00	.....
Defenses for insular naval stations and coal depots	.....	500,000.00	500,000.00	.....	500,000.00
Naval Observatory	10,000.00	27,800.00	17,800.00	.....	17,800.00
Hydrographic Office	.....	230,000.00	230,000.00	.....	230,000.00
Bureau of Medicine and Surgery	210,000.00	245,000.00	55,000.00	20,000.00	50,000.00
Bureau of Supplies and Accounts	3,543,849.28	4,367,590.28	826,652.00	2,911.00	26,652.00
Bureau of Construction and Repair	7,360,824.25	9,925,824.25	2,600,000.00	35,000.00	530,000.00
Bureau of Steam Engineering	3,462,900.00	4,289,000.00	846,100.00	20,000.00	655,400.00
Naval Academy	227,115.45	243,705.77	36,590.32	20,000.00	25,489.84
Marine Corps	2,798,520.27	2,993,465.73	384,600.46	189,655.00	208,800.00
Increase of Navy:					
Construction and machinery	21,000,000.00	17,303,010.00	.....	3,696,990.00	.....
Armor and armament	4,000,000.00	6,000,000.00	2,000,000.00	.....	.....
Equipment	400,000.00	400,000.00	.....	.....	.....
Grand total	77,924,535.60	98,910,984.63	31,148,534.03	10,162,085.00	21,631,823.09

MISCELLANEOUS RECEIPTS.

In the appendix will be found the usual detailed statement of deposits on account of the sales of Government property, etc., prepared in the office of the Auditor for the Navy Department. This statement shows that the total amount deposited in the Treasury from November 1, 1900, to November 1, 1901, arising from the sale of condemned naval vessels, condemned war prizes and their cargoes, stores, materials, nautical books and charts, fuel, clothing, rents of Government property, supplies furnished to other branches of the Government, and from other lawful disposition of public property under the cognizance of the Navy Department, was $360,490.20. Of this sum, $142,437.07 was covered into the Treasury as "Miscellaneous receipts on account of proceeds of public property," as required by section 3618 of the Revised Statutes. Included in the remainder, $218,053.13, are sums aggregating $53,629.21 accruing from sales of condemned war prizes and their cargoes, which amounts have been deposited to the credit of the "Navy pension fund, Spanish war," and "Prize money to captors, Spanish war," pursuant to the provisions of the Revised Statutes on the subject. The balance, $164,423.92, has been carried, as authorized by law, to the credit of the proper appropriations, to be applied to naval purposes.

This statement shows fourteen deposits that were made in October, 1900, but were not included in the statement of last year because a proper disposition of the money had not then been determined and it had not then been covered into the Treasury.

SALE OF CONDEMNED VESSEL.

The U. S. S. *Minnesota*, lying at the navy-yard, Boston, Mass., used for many years as a receiving ship for apprentices and as an armory for the Massachusetts Naval Militia, was the only vessel sold since the last annual report of this Department.

This vessel having been condemned as unfit for further service, was stricken from the Navy Register in pursuance of section 2 of the act of August 5, 1882, and was offered for sale by the Department's advertisement of July 17, 1901, in accordance with section 5 of the act of March 3, 1883. The appraised value of the *Minnesota* was fixed by the Board of Survey and Appraisal at $15,000.

The vessel was sold to Messrs. Thomas Butler & Co., Boston, Mass., that firm having submitted the highest bid, namely, $25,738.38, and the proceeds arising from said sale, after deducting the expense of advertising, which amounted to $94.87, have been covered into the Treasury under section 3618 of the Revised Statutes as miscellaneous receipts on account of "proceeds of Government property."

A detailed statement of this sale will be found in the appendix to this report.

MEDICINE AND SURGERY.

A large proportion of the naval force has for the past year been employed in and about the Philippines. This force has been notably free from epidemic diseases, and, with the exception of Cavite fever, the cases admitted to the Cavite hospital have been those that would have occurred in any southern climate. In the force afloat and ashore the death rate from disease has been less than that for the previous year.

The reports from Guam indicate that the inhabitants are proceeding with the establishment of a civil hospital, showing a desire to conform to the customs of other communities. Typhoid fever on the island, common during the first part of the year 1900, has now almost disappeared. The natives continue to be taught by the medical officers of the station to properly care for themselves, and the death rate has been considerably reduced, especially among women and children.

A dispensary has been opened at Pago Pago, island of Tutuila, where the natives obtain such medicines and treatment as they require.

The sick quarters at San Juan, Porto Rico, have had relatively few occupants during the past year, and few cases of disease have occurred among the naval force remaining in Habana.

The passage by the last Congress of the act giving assistant surgeons in the Navy the same rank as assistant surgeons in the Army has proved of great benefit to the corps. A very desirable class of young medical men is now seeking admission, and the number of vacancies has been reduced from 17 at last report to 4, and it is probable that these will soon be filled.

THE CIVIL SERVICE OF THE DEPARTMENT.

Summary of labor-board reports for the year ending August 31, 1901, and comparisons of totals for 1897, 1898, 1899, 1900, and 1901.

Navy-yards.	Number of applications for employment.	Rejected by the labor board as not eligible under the rules.	Called for by heads of labor departments.	Certified for employment to heads of labor departments.	Rejected by heads of departments as not qualified.	Declined service.	Failed to report for employment.
Portsmouth	1,528	1	848	825	17	19	212
Boston	2,388	65	1,644	1,627	1	18	385
New York	6,407	56	3,445	3,413	8	29	855
League Island	2,304	68	1,160	1,102	21	26	283
Washington	3,400	3	2,606	2,586	2	60	503
Norfolk	2,189	36	1,353	1,309	1	3	243
Mare Island	2,635	13	1,518	1,480	5	3	461
Total, 1901	20,851	242	12,574	12,342	55	158	2,942
Total, 1900	20,636	260	16,683	15,706	127	172	4,160
Total, 1899	21,621	178	12,723	12,607	49	162	2,938
Total, 1898	31,254	305	22,367	21,152	170	182	4,314
Total, 1897	16,226	105	6,538	6,699	49	62	982

The Navy Department bears witness to the utility of the present system of the civil service. It prevents favoritism and makes merit the test of entrance into place and of standing and advance in it, and the result has been a decided increase in efficiency. In some cases where the examinations of the Civil Service Commission, which commission this Department has always found most helpful, have not been able to supply the needs of the Department, it has been permitted to adopt within itself the methods of that commission, thus recognizing in local application the general principle of what is now an approved reform. For instance, the regulations governing the employment of labor at navy-yards, promulgated in September, 1891, provided that foremen, master mechanics, quartermen in charge, and other men in charge at navy-yards, should be appointed after competitive examination before a board of naval officers. The rules of the United States Civil Service Commission, as amended by the President May 29, 1899, provided that all special mechanics and civilian assistant inspectors of work and material (including armor, armor plate, ordnance, marine engines, hulls, buildings, dredging, etc.) employed at navy-yards, naval stations, and at private shipbuilding and manufacturing establishments where work is done by contract for the Navy Department, should be appointed after competitive examination before a board of naval officers, in the same manner as foremen, master mechanics, etc. In pursuance of the same policy the Department addressed the following letter to the President November 16, 1900, who approved its recommendation November 20, 1900:

WASHINGTON, *November 16, 1900.*

SIR: All per diem draftsmen in the Navy Department, navy-yards, naval stations, and at private shipbuilding and manufacturing establishments where work is done for the Department by contract were placed in the classified service under Executive order of May 6, 1896. Prior to that date draftsmen were appointed by the Secretary of the Navy upon the recommendation of the officer under whom they were to work. The latter method proved unsatisfactory, and draftsmen were placed in the competitive classified service upon the recommendation of the Department. Since their classification the Department has experienced much difficulty and delay in securing from the Civil Service Commission eligibles who are competent to perform the work required. In fact, the periodical examinations held by the United States Civil Service Commission do not, for some reason, attract as applicants the class of persons having the qualifications required by the different bureaus of the Department.

The demand for ship draftsmen, marine engine and boiler draftsmen, architectural draftsmen, structural steel work draftsmen, cartographic draftsmen, and ordnance draftsmen has been for a number of years greater than the supply, and the fact that six or seven weeks intervenes between the examination and the time that persons are notified of their standing, and the additional fact that applicants can not tell to what point in the country they will be detailed for work if they pass and receive appointment—most of them being married men—results in a very small number of competent persons making application for examination.

To obviate the delay in obtaining competent men, the Civil Service Commission has authorized temporary appointments and has held special examinations, but the Department has been unable in many instances to get competent men to accept

temporary appointments of ninety days, although given the verbal assurance that they would be given permanent appointment, provided they pass the required examination. A head of department at one of the navy-yards stated within the past week that unless he can secure competent draftsmen within the next few weeks it will be necessary to discharge between 300 and 400 workmen, because plans of work required can not be prepared.

It is recommended that ship draftsmen, marine engine and boiler draftsmen, architectural draftsmen, structural steel work draftsmen, electrical draftsmen, cartographic draftsmen, and ordnance draftsmen, including assistant or lower class draftsmen of the various grades, shall hereafter be appointed in accordance with the provisions of paragraphs 74 to 83, inclusive, Navy Yard Order No. 23, Revised, and that the Secretary of the Navy may appoint for a period of not more than thirty days, pending result of examinations, such draftsmen as may in his judgment be necessary for the protection of the interests of the Government.

The examinations conducted by the Navy Department have proved eminently satisfactory in the cases of special mechanics, and civilian assistant inspectors of work and material, etc., and in such examinations we have the benefit of the judgment of at least three technical officers, while the examinations conducted by the Civil Service Commission have the benefit of the experience of but one technical officer. The Navy Department's examinations for draftsmen will be held at or near the places where the services of the draftsmen are needed, and applicants can, prior to examination, acquaint themselves by observation as to the specific character of work they will be called upon to perform and the place where it is to be performed.

As in the cases of special mechanics and assistant inspectors of work and material, this is expected to result in obtaining a list of eligibles who, as a rule, will accept as soon as the positions for which they are examined are tendered to them. Besides, under the Navy Department's methods it will take but two weeks, or at the longest three weeks, to hold an examination and to procure satisfactory draftsmen if they are in the country and desire employment, while at present the Civil Service Commission's methods for examination, certification, and appointment take three months or longer. The Department thoroughly believes in the principle of appointments being made on the score of merit, and the method now suggested still carefully preserves this principle, the advantage being that it secures more speedy results, which in the present state of the demand for draftsmen is of vital importance. To conduct the business of the Navy Department it is absolutely necessary to have an eligible list of draftsmen who will accept appointments when tendered.

I respectfully recommend,

That Rule III, section 8, clause (*m*), of the Civil Service Rules be amended to include ship draftsmen, marine engine and boiler draftsmen, architectural draftsmen, structural steel work draftsmen, electrical draftsmen, cartographic draftsmen, and ordnance draftsmen, including assistant or lower-class draftsmen of the various grades.

Very respectfully,

JOHN D. LONG, *Secretary.*

To the PRESIDENT.

EXECUTIVE MANSION,
November 20, 1900.

The above recommendation of the Secretary of the Navy is approved to take effect this date. The United States Civil Service Commission will promulgate the amendment.

WILLIAM MCKINLEY.

The results of the amendment of November 20, 1900, are shown by the following statements and by the tables printed in the Appendix:

Between November, 1899, and November, 1900, in response to requests from the Navy Department for draftsmen, the United States Civil Service Commission made 64 certifications, containing the names of 133 persons. Of the 64 certifications but 25 contained the full quota of three eligibles for each place. Of the 133 persons certified, 53 were appointed, 16 declined appointment, 36 were not qualified, and 2 were already in the service. The number of persons certified, 133, includes persons who were certified for two or more places.

The Department, owing to the inability of the Civil Service Commission to certify a sufficient number of eligibles during this period, was compelled to appoint 41 draftsmen temporarily without formal examination. Such temporary appointments were made with the approval of the United States Civil Service Commission, but the delay in getting competent persons by this method was unsatisfactory.

As will be seen by the tables in the Appendix, the Navy Department held 74 examinations from November 20, 1900, to November 1, 1901. Six hundred and forty-four applicants were examined, 374 failed, 270 passed, 123 were appointed to existing vacancies, and 32 were appointed to subsequent vacancies. A comparison of the tables in the Appendix will show that the amendment of November 20, 1900, has been of decided advantage to the Department in the matter of securing draftsmen, and that the examination of applicants in the vicinity of places for which they are examined is a great improvement in the way of obtaining the required technical and professional employees, who, if the Government offer only a distant opening, are attracted from it by the nearer opportunities of civil life.

NAVAL OBSERVATORY.

Attention is called to the first and very important report of the Board of Visitors to the Naval Observatory. I earnestly commend its recommendations to careful consideration. This board was created by act of Congress in March last. I believe its visitations will be found valuable in making the Observatory efficient and in rank with the best institutions of the land. It appears that no other observatory in the world has the expenditure of so much money, but also that its results are not commensurate with those of some other observatories the expenditures of which are less. Its head should of course be the best astronomer, who has proper administrative qualifications, that can be found in the country. It is especially desirable that he should have continuity of tenure, and the Observatory has undoubtedly suffered from frequent changes in its superintendents.

While the average term of service of superintendents at Greenwich has been twenty-eight years and at Harvard fifteen, at the Naval Observatory it has been only a little over three. I urgently recommend that the legislation of the last Congress to the effect that "the Superintendent of the Naval Observatory shall be, until further legislation by Congress, a line officer of the Navy of a rank not below that of captain," be repealed, and that on the contrary it be enacted that there shall be no limitation upon the field from which the superintendent is to be selected. As well might the above quoted statute have provided that the Commissioner of Fish and Fisheries should be selected from the line of the Marine Corps, or the Director of the Geological Survey from the line of the Army.

There is no vital relation between the Navy and the Observatory. It may happen that some naval officer is preeminently qualified for such a place, in which case he would be appointed to it, but the country is entitled to have unlimited range of selection. The present limitation, which shuts out the whole body of civilian astronomers and even any astronomer in the Navy who does not happen to be in the line, or, if in the line, below the rank of captain, is peculiar. Only a very small proportion of naval officers are not below the rank of captain, and as most of them are required for naval services—a requirement which is now increasing—the list from which selection can be made is a noticeably small one. It is evident, too, from the wording of the above quotation from the statute, that Congress in passing it had in mind further legislation in this respect.

INCREASE OF THE NAVY.

The Navy to-day is a far greater factor in our relations with the world than it was before the recent national expansion which now includes Porto Rico, the Hawaiian Islands, the vast area of land and sea in the Philippines, and our obligations to Cuba. If we are to have a Navy at all it must be commensurate with these great extensions—greater in international even than in territorial importance. This necessarily involves the construction of more naval vessels, their manning, exercise, and maintenance.

The General Board, of which the Admiral is president, recommend the following increase of the Navy:

Four first-class battle ships.

Two first-class armored cruisers.

Four picket vessels of about 650 tons trial displacement, with a sea speed of 15 knots, with twin screws, carrying a battery of four 6-pounder and two Colt's guns and a complement of 60 officers and men.

Six sheathed and coppered seagoing gunboats of about 1,000 tons trial displacement, with moderate sail power, similar to the *Annapolis* class.

Six light-draft steel gunboats of about 600 tons trial displacement, for insular service in the Philippines.

Six light-draft, steel gunboats of about 200 tons trial displacement, not to exceed 6 feet draft, for insular service in the Philippines.

Six steel sailing training ships of about 2,000 tons trial displacement.

One collier of 10,000 tons cargo capacity and a sea speed of 12 knots.

Three thousand enlisted men, in order that they may be enlisted and drilled in preparation for the completion of the ships.

Seven hundred and fifty marines. (This number needed for duty on board ship, and does not include the necessary garrison for posts at home and in our insular possessions.)

An increase of 50 per cent in the number of naval cadets now allowed by law, in order to provide for the increase of officers needed for the ships recommended above.

The Board on Construction recommend:

Three seagoing battle ships of about 16,000 tons trial displacement.
Two armored cruisers of about 14,500 tons trial displacement.
Six gunboats of about 1,200 tons trial displacement.
Six gunboats of about 600 tons trial displacement.
Six gunboats of about 200 tons trial displacement.
Two colliers of about 15,000 tons trial displacement.
One repair ship of about 7,500 tons trial displacement.
Six training ships of about 2,000 tons trial displacement.
Four picket boats of about 650 tons trial displacement.
Four tugboats.

All the vessels thus recommended are desirable in the prospective and harmonious development of our naval force. A larger increase than usual is also desirable in view of the fact that none was made last year. Some of the vessels above recommended, however, can better than others be omitted for the present from the list and await appropriation hereafter. Among these are the gunboats of 600 tons displacement, in case the picket boats of similar dimensions are authorized; also the repair ship and a portion of each of the other classes of smaller war vessels. The Department therefore recommends:

Three first-class battle ships;
Two first-class armored cruisers;
Three gunboats, each of about 1,000 tons trial displacement;
Three gunboats, each of about 200 tons trial displacement, for insular service;
Three picket boats, each of about 650 tons trial displacement;
Three steel sailing training ships, each of about 2,000 tons trial displacement.
One collier of about 15,000 tons trial displacement.
Four tug boats.

The Department will submit to Congress in December next, as directed by the last naval appropriation bill, a general description of two seagoing battle ships and two armored cruisers, according to which the battle ships and cruisers above recommended should be built if appropriation is made therefor.

CONCLUSION.

In making this report I take pleasure in acknowledging the efficient and zealous service of the Assistant Secretary, of the chiefs of the bureaus and offices of the Department, and of the officers and men generally of the Navy and the Marine Corps on shore and afloat, as well as of the civilian force.

JOHN D. LONG,
Secretary of the Navy.

PAPERS

ACCOMPANYING

THE REPORT OF THE SECRETARY OF THE NAVY.

REPORT OF THE ASSISTANT SECRETARY OF THE NAVY.

NAVY DEPARTMENT,
Washington, November 9, 1901.

SIR: In obedience to your directions, I have the honor to submit herewith the annual report of this office for the past year.

The regulations for the Government of the Navy assign to the Assistant Secretary cognizance and general supervision of all matters pertaining to—

The islands of Guam and Tutuila and the United States naval stations in island possessions and elsewhere beyond the continental limits of the United States: vessels in building at navy-yards; repairs to vessels; ships fitting for sea; tugs and other boats for service at navy-yards; the Marine Corps and applications of enlisted men thereof for discharge; the Naval Militia; the Naval War College; the Library and War Records Office; reports of boards of survey; surveys and appraisals afloat and ashore; the loaning of flags belonging to the Navy.

Stations elsewhere beyond the continental limits of the United States are those at San Juan (Porto Rico), at Honolulu, and at Cavite, in the Philippine Islands.

GUAM.

The report of Commander Seaton Schroeder, U. S. N., who since July 1, 1900, has been governor of Guam, will be found in the appendix. This officer, being needed as a witness before the Schley court of inquiry, was detached and ordered home in the summer. Commander William Swift, U. S. N., of the *Yorktown* relieved Commander Schroeder, and has been temporarily acting as governor. After giving his testimony, Commander Schroeder left the United States by steamer from San Francisco in October last on his return to his post of duty.

The governor's presence in Washington was of service to the Department, affording as it did an opportunity for describing in person certain of the conditions that exist at his station.

The year will be memorable in Guam's history for the occurrence of an event of disastrous consequences. On the 13th of November a terrific hurricane devastated the island and caused the loss of the *Yosemite*, five of whose crew lost their lives. The sea submerged the lowlands and flooded the streets of Agana, the capital of the island. Crops and vegetation were almost entirely wiped out, while Government buildings were injured and many of the slightly built houses of the natives were either destroyed or badly damaged.

As might have been expected, both officers and men of the station devoted themselves heroically to the task of rescuing women and children. The medical officers, already overworked from an epidemic of grippe, relieved the suffering amongst the natives at a cost to themselves of prostration from fatigue and fever.

Of the 255 deaths that occurred on the island during the year, 34 were caused by the hurricane. The havoc visited upon the island made it necessary to expend nearly $10,000 for the purchase of food. The promptitude with which this aid came to the sufferers evoked grateful expressions on every hand. The incident was not without its value in strengthening the loyalty of the people of Guam.

Attention is invited to the governor's report, covering the fiscal year ending June 30, 1901. The sum raised by taxation, it will be seen, is not large, but the figures show a gain for the year of $11,585.10. The money is applied to the building of roads, the repair of bridges, and the support of schools.

Governor Schroeder has taken deep interest in the cause of education. At his request the Department has sent out a competent teacher, Mr. H. H. Hiatt, of Nebraska. Mrs. Hiatt, who accompanies her husband, has had long experience in teaching. The people are very desirous of being taught English. They welcome for their children the prospect of giving them a good common-school education.

This office approves of Commander Schroeder's recommendation that Congress empower the Navy Department to authorize the commandant of the station, being outside of the continental limits of the United States, to convene general courts-martial.

The board appointed under act of June 16, 1900, for surveying the harbor of Guam and recommending works of defense, has sent in its report. The conclusions reached by the board have received, without exception, the approval of this office.

The complete isolation of Guam is a marked feature of existence there. Mails are very infrequent. In the spring of 1900 army transports began the custom of making a stop of a few hours, when occasion should require, on their way to and from Manila. In August, 1900, the War Department directed that the transports leaving San Francisco on the first of each month should touch at Guam for mails.

The Department has intended to keep a ship and collier in the harbor of Guam, but it has not been at all times possible to do so. Of course the unfortunate loss of the *Yosemite* was severely felt. As yet no ship has taken her place. The *Supply*, however, of 4,460 tons, is nearly fitted out at the New York Navy-Yard, and will soon sail for Guam, to remain on that station.

TUTUILA.

The island of Tutuila, one of the Samoan group, lies in the pathway of commerce from San Francisco to Australia. An interesting report from Captain Tilley, commanding the station, is appended. The natives continue to be content under our flag, and their condition has been maintained much as it was when the United States took sole possession. Such changes as are effected have been but gradually accomplished, with the result that peace and good feeling prevail.

The past year has been uneventful at this station, the chief activity being the building of a coal-storage shed and pier, now about com-

pleted, though much grading remains to be done. Here, as at Guam, the question of education has assumed the first importance. For many years an excellent work has been accomplished by the London Missionary Society. There are a few Americans engaged in educating the children of the natives. The recommendation of the commandant that $5,000 be appropriated to establish and maintain a primary school at Pago Pago, for the instruction of children of both sexes, meets with the cordial approval of this office.

Commander Uriel Sebree, U. S. N., is to assume command of the station and of the U. S. S. *Abarenda*, in place of Capt. B. F. Tilley.

OTHER STATIONS.

There is no occasion to make a report as to naval stations at Porto Rico, Honolulu, and Cavite, in the Philippine Islands. The several bureaus of the Department are directly concerned in administering the affairs of these stations, and their reports furnish all necessary information. The project for a station at Olongapo, it may be observed, however, when carried into effect, will afford opportunity for such improvements as modern methods have devised.

A word might perhaps be added to remind Congress that the necessity increases for an appropriation sufficient to build and equip a commodious marine hospital at the Punch Bowl, a site held by the Navy Department just outside of Honolulu.

REPAIRS.

The business of repairing vessels at the navy-yards has grown in volume during the past year. Almost every yard has had all the work of this nature that it could attend to. The first object in making repairs is to keep in readiness the needed material, so that when repairs are ordered the Department can count reasonably upon the work being done at the time fixed.

It is safe to say that the business of repairing is now better in hand than it ever has been before.

NAVAL MILITIA.

A highly important branch of work in the office of the Assistant Secretary is that pertaining to the Naval Militia. For the last three years the active duty of attending to the operations of the Naval Militia has been entrusted to Lieut. Commander William H. Southerland, U. S. N. A full and valuable report of this officer is printed in the appendix, to which your attention is invited.

The Naval Militia is made up of several State organizations. The leading purpose is that a State may have at its disposal a select body of men trained to naval warfare who in time of actual war can be relied upon as defenders of a coast with which they are more or less familiar. There are always a considerable number of men having a taste for naval life, who, while outside of the United States Navy, are ready and willing to serve on shipboard when needed. There are certain advantages springing from the State pride that will sustain an organization of this character, which advantages ought not lightly to be put aside. Not infrequently conspicuous examples occur of State

officers who do creditable work in a service strongly resembling, if not identical with, that upon a commissioned vessel of war of the United States Navy.

Notwithstanding that some States having naval militia have shown of late a lack of interest in keeping up the work, the Navy Department does not hesitate to declare that the system, substantially as now organized, deserves to be continued. Unfortunately, it happens that the facilities of the Department for putting vessels at the disposal of the several States are not such as are desired. The Department, however, stands ready, as heretofore, to do all in its power to help the State organizations, whether by arranging a practice cruise or otherwise.

In July last I inspected at Buffalo the Naval Militia of the State of Michigan on board the *Yantic*. Officers and men went through the drill in an exceedingly creditable manner. The governor of Michigan was on board at the time, and it was a pleasure to commend the ship's company in his presence. I fully agree with Lieutenant-Commander Southerland that Commander Strathearn Hendrie, in command of this body of Naval Militia, is a fine specimen of an officer.

NAVAL RESERVE.

I have the honor to renew with added emphasis what was said in my report of last year as to the need of a naval reserve. The subject has now for some time been before Congress. The present period is unusually favorable for legislation to this end. I am convinced that House bill 12126 of the last Congress, known as the Foss bill, with slight modifications, is well adapted to accomplish the result desired. It has seemed better, as one modification, that the division should be by districts and not by States.

This bill, it may be explained, is substantially the same as that which was drafted at the Department, and sent in December, 1898, to the chairman of the Senate Committee on Naval Affairs, bearing the approval of the Secretary of the Navy. It provides for an auxiliary force to be known as the United States Naval Reserve. Officers, petty officers, and enlisted men of the Naval Militia who served in the war with Spain, and men enlisted for not less than one year, who served therein, as well as all former officers of the Navy and graduates of the Naval Academy who have honorably left the service, may be enrolled, under the direction of the President, in the reserve, in the grades and rates held by them when honorably discharged or when they resigned. As modified, the country is divided into convenient districts. The Secretary of the Navy may designate a line officer of the Navy to assume charge of the reserve force enrolled in any district.

In brief, the reserve as created shall be a national establishment, knowing nothing of State lines. It is to be kept prepared, so that upon a breaking out of war it can be relied upon to respond instantly to the call for service.

The proposed naval reserve, it should be borne in mind, will in no way conflict with or take the place of the present system of Naval Militia. The two bodies are distinct and are capable of being kept up in perfect harmony.

The Naval Militia defends the inner coast line. The naval reserve becomes a part of the Navy itself. The men of the reserve will be taken on shipboard, not as an organization, but as trained sailors sent to this

or that ship as they shall be wanted. Lieutenant-Commander Southerland, U. S. N., deals with this topic in the closing page of his report, and I heartily commend his views. Let us hope that Congress will proceed without delay to enact legislation so vitally needed.

While it is likely that some variance of opinion may exist as to the details of legislation best fitted to put into practical operation a plan for a naval reserve, there is but one sentiment, I believe, in and out of the service, as to the necessity for such an establishment.

It is but the simple truth to declare that there are few duties more pressing upon the attention of Congress than that of providing the country with some practical plan of beginning and maintaining a naval reserve.

NAVAL WAR COLLEGE.

One of the most interesting offices of the Assistant Secretary is to deliver an address at the opening of the Naval War College. This duty I performed at Newport, R. I., on the 3d of June last. The War College, I am happy to state, is in a flourishing condition. Its officers, and those in attendance for instruction, all seem animated with an earnest desire to carry forward in the best possible manner the work of the higher training of the naval officer.

Under the administration of Capt. French E. Chadwick, U. S. N., this institution maintains the standard of efficiency that has characterized it for years past. Captain Chadwick's report, herewith appended, affords a view of the scope of the labor that is being prosecuted there, and points out what may be expected in the future. I can not but regard the conditions that prevail from time to time at the Naval War College as a sure index of the efficiency of the Navy itself.

LIBRARY AND NAVAL WAR RECORDS.

An incentive to the performance of duty on the part of an officer of the Navy lies in the reasonable assurance that when he shall have done his work well a record will be made of the fact. The Navy Department may fitly endeavor to gather up and preserve every material record of service that stands to the credit of its officers and men. The library serves a purpose that reaches into the future, and accomplishes ends whose importance may not lightly be estimated. The collection of books upon the shelves of the library is growing, slowly, but in the right direction. During the year special attention has been bestowed upon the classification of volumes, so that the usefulness of the collection has been greatly enhanced.

Continuous effort ought to be made to bring together for purposes of preservation all papers and letters of historical worth that treat of events of a naval character. We should strengthen the library in its manuscript department. I ask attention to a letter from Professor Rawson, U. S. N., in charge of the library, which will be found in the appendix.

The Naval War Records are compiled from official papers. Documents and letters are printed in full that relate not only to the operations conducted by the Navy of the United States, but also, so far as it is possible to obtain them, to the doings of the Confederate Navy. Twelve volumes thus far have been printed and distributed. Special care has been taken to avoid duplication. It is confidently believed

that a great degree of accuracy has been attained in transcribing the records by verifying the names of individuals, vessels, and places. That light may be thrown upon the material thus collected, maps have been added, together with plans and sketches, and reports from original data. The library bids fair to become in time a veritable treasure house of information regarding the naval history of the United States.

PORTRAITS OF SECRETARIES OF THE NAVY.

With your permission, I have made some progress in the direction of obtaining portraits of Secretaries of the Navy to supply the omissions on the list. At present there are hanging upon the walls of the Secretary's offices and of the reception room of the Department oil portraits of eighteen of your predecessors. This is a little more than one-half the entire number of those who have filled the office of Secretary.

Recent additions are portraits of Benjamin W. Crowninshield, who was Secretary from 1814 to 1818, and John Branch, who filled the office from 1829 to 1831. We have been fortunate in securing excellent and faithful copies by Tenney of these portraits, which reproductions are not without merit as works of art; and an order is now being executed for the portrait of John P. Kennedy.

There remain to be obtained portraits of the following Secretaries: Robert Smith, William Jones, Smith Thompson, Samuel Southard, Mahlon Dickerson, James K. Paulding, George E. Badger, David Henshaw, Thomas W. Gilmer, William B. Preston, William A. Graham, Nathan Goff, jr., and William C. Whitney. Should a descendant of one of the earlier incumbents of the office here named desire to further the efforts of the Department in this respect he may be assured that such assistance will be welcome.

In concluding this report it affords me sincere pleasure to acknowledge the many obligations of the office to Mr. Alexander B. Legaré and the small force of clerks under his direction. Each day they have done their work cheerfully and thoroughly, with the result that their record for efficiency is all that the most exacting standard could have required.

Very respectfully,

FRANK W. HACKETT,
Assistant Secretary.

THE SECRETARY OF THE NAVY.

REPORT OF THE CHIEF OF THE BUREAU OF YARDS AND DOCKS.

DEPARTMENT OF THE NAVY,
BUREAU OF YARDS AND DOCKS,
Washington, D. C., October 15, 1901.

SIR: In obedience to the orders contained in the Department's letter of August 13, 1901, I have the honor to submit a report of the operations of this Bureau for the fiscal year ended June 30, 1901, accompanied by a set of estimates for the fiscal year ending June 30, 1903.

The expenditures during the year aggregate $5,336,361.10, of which

$3,994,627.15 were for works of improvement, for which specific appropriation was made by Congress. The remainder, $1,341,733.95, was applied, from various appropriations, to the repair and maintenance of the navy-yards and stations, for the civil establishment, etc., and a small sum for improvements contracted for under the appropriation "National defense."

Various balances of appropriations remaining after the completion of public works, purchase of land, etc., have been turned into the surplus fund of the Treasury, aggregating $20,154.81.

Operations at the more important yards and stations have been quite extensive, and the public works appropriated for by Congress have covered a wide field, and many of them are of large magnitude. Many of the improvements of larger extent authorized since the last war have been entirely completed within the year, adding much to the equipment of the yards and to their efficiency. Many others are under construction in various stages of completion, and by their number and extent giving the stations an unexampled period of activity and transformation. As these gradually assume shape, the capacity and readiness for the larger operations incident to the constant increase of the floating establishment enlarge. The demand for these greater conveniences and facilities at the yards is presented on every hand by every Bureau, and as they are supplied their value marks the wisdom of the provisions Congress has made for furnishing them.

Sixty-two contracts were made for new works of improvement and twenty-three supplemental contracts providing for extensions or modifications relating to works previously under contract. A large number of the public works are not built by contract, but have been completed by day labor by the yard forces or are being so constructed. A number of the latter are best handled by the Government force direct, and others are being so constructed with a view of comparing results between those built by the yard organization and those by contractors. The objects put under contract during the year are at a cost of $1,468,500.73.

The progress upon the construction of the several dry docks contracted for has not been altogether satisfactory for various reasons, and it does not appear that any of the five will be completed within the times limited in the contracts unless progress is more rapid in the future than it has been in the past.

The steel floating dry dock being built under contract with the Maryland Steel Company at Sparrows Point, Md., is very near completion, and will, without doubt, be subjected to the trial and test upon the result of which its acceptance by the Government is dependent in time for its formal receipt before the end of the present calendar year should such test prove to be satisfactory. It was put afloat for transfer to the naval reservation at Algiers, La., October 15, 1901. The construction of this dry dock was delayed considerably in the early stages because of the difficulty of securing prompt delivery of the steel to be used in construction, which was mentioned in the last report, and a further delay was caused by a strike in one of the trades. It is, however, the first of the dry docks authorized by Congress of late to reach completion. Its capacity will be equal to and exceed the duty of lifting any battle ship we now have, and sufficient for any war vessels now contemplated. While it is rated as a 15,000-ton dry dock, it will lift one of 17,000 tons weight in quiet waters.

The graving dock being built at the Portsmouth Navy-Yard is the

most advanced of the four of its class now constructing. Its progress has been entirely satisfactory from an engineering standpoint, in that no untoward developments have arisen, the cofferdam has proven quite efficient, and the foundation, which is in rock, has been devoid of troublesome veins of water. The excavation having reached its full depth over a considerable part of the site, the work of actual building up of the dock was begun, and a large quantity of concrete and granite work has been laid. This dock is under contract with John Peirce.

The dry dock building at the Boston Navy-Yard, by O'Brien & Sheehan, is progressing rapidly at present, but the advance during the whole year has been far from satisfactory. Your attention was called to this condition upon several occasions and steps were taken by you to urge the contractors to more expeditious measures. They had misfortunes with their cofferdam, which had given them much trouble in the previous year, and a serious accident occurred to it in the early part of the present. The overcoming of these cost them much time. The outlook for this dock is very much more favorable.

The dry docks being built at the League Island and Mare Island navy-yards have had very little progress within the year, owing to the long and tedious negotiations between the contractors upon one side, and boards of officers, the Bureau, and the Department upon the other, with respect to the increase in compensation to be paid the former, under the terms of the contract, for constructing both docks of concrete and stone instead of timber. In the case of the League Island dock the contractors—the Atlantic, Gulf and Pacific Company—were not satisfied with the amount finally determined upon, and signed the agreement required by the contract to carry the changes into effect at the sum fixed upon, under protest, stating that they reserved to themselves the right to go to the courts for further compensation. In these dry docks the cofferdams are advanced, one being entirely complete, the excavations are largely made, and the foundations should be started soon.

The inspection of the steel floating dry dock in the harbor of Habana, Cuba, belonging to the Spanish Government, the purchase of which from the Government of Spain for a sum not to exceed $275,000 was authorized by act of Congress of June 7, 1900, referred to in the last annual report as having been deferred on account of the presence of yellow fever in the harbor, was made by a board of officers in January, 1901.

The report showed a very large expenditure to be necessary to put it in first-class condition for handling vessels of its rated capacity of 10,000 tons, and fit it for transfer to another port by sea, and the price then asked by the Spanish Government being such as to make the entire expense very large and beyond the limits of available funds, you decided to discontinue negotiations for its purchase. Subsequently, it appearing that much more favorable terms might be obtained, leaving enough of the appropriation available for putting the dock in serviceable condition, and deeming it wise to provide docking accommodations in the Philippine Islands as soon as practicable, the Department opened negotiations for its purchase. Agreement of purchase was effected in July, 1901, and title acquired in September last, both after the close of the year, for the sum of $195,000. The remainder of the appropriation of $300,000, for all expenses, is being used in overhauling the dock, making repairs, and improving its operative machinery, and otherwise preparing it for transfer.

The payments on account of the dry docks named above have been $802,618.10 during the year and $1,521,641.53 since the beginning.

Other works of importance which have been carried forward include extensions of the water supply and distributive systems, of the sewers, railroads, paving of streets, electric plants for light and power, and those of smaller extent, but all enhancing very much the usefulness and capacity of the stations. These have all gone forward in practically all the yards and stations. They are of a class which must accompany the works of greater magnitude.

Preparations for driving the pumps of the new dry docks, the motive power of which is electricity, have greatly increased the necessary output of the power stations of this Bureau, and the work is proceeding upon a line to give to each yard one generating station for all steam and electric power used by this Bureau. This has been accomplished at the New York Navy-Yard by the construction of a central power house and plant which is supplying, at the present time, three other yard departments, as well as yards and docks, with excellent results and economy. At the Portsmouth Navy-Yard a similar plant has been initiated, which remains to be largely increased for the duty of driving the pumping machinery of the dry dock now building, and furnishing a system of salt water fire protection. Similar central plants are planned for League Island and Norfolk, and upon the latter much progress has been made, with a prospect of its early completion and use.

This concentration of power, for the purposes of yards and docks, which are varied and extensive, and its supply to the bureaus not desiring to generate for themselves where their needs are small, and the furnishing of a temporary supply to one bureau upon a very large scale in the case of the New York Navy-Yard, suggests the propriety and economy of eventually establishing general central power plants at all the yards for generating and furnishing power to all bureaus for all purposes, without charge against the accounts of those bureaus, the plants being established, maintained, and run from the appropriations of one bureau.

The losses from fire during the year have been estimated at $215,740, which includes damage to the buildings and contents. The principal loss was in case of the construction and repair spar shed and boat storage shed at Boston, the destruction of which, although occurring in the year, was mentioned in the last report.

The fire protection systems are being improved in several of the yards, those at New York and Washington having been largely advanced during the year. Others are upon plans requiring power from stations not yet fully established and have been held back accordingly, or are dependent upon increases in the water supply not yet effected. Upon these latter less progress has been made.

The slip for the joint use of the Government and the Fitchburg Railroad Company, in the Boston Navy-Yard, authorized to be built by this company by act of Congress dated March 3, 1899, was not complete upon the expiration of the time limited by the said act, and the company was allowed to continue work at its own risk, intending to make application to Congress to extend the time, as stated in the Bureau's last annual report. The slip is now in use by both parties, but the legislation referred to has not yet been secured.

NAVAL STATION IN PHILIPPINES.

Congress enacted, in the portion of the naval act of March 3, 1901, under public works of this Bureau, that you should have the coast and waters of the Philippine Islands examined into and report to the next Congress upon the advisability of establishing a United States naval station on said coast, and the most suitable place for the same.

The board, of which Rear-Admiral Remey was senior member, appointed by you made such an examination as required, and reported in January, 1901, in favor of establishing a station at Olongapo, in Subig Bay, island of Luzon. Subsequently the board, of which Rear-Admiral H. C. Taylor was senior member, was organized to make a study of the needs of the service at that point in the matter of a station of the largest class and present a general plan for its development, with estimates for those objects which shall be first appropriated for. This report has been received since the close of the year, and its recommendations have been made the basis of estimates already submitted by this Bureau for transmission to Congress. The site recommended seems to be one admirable in most respects and the best the islands afford. It had been selected by the Spanish Government for a similar purpose and some improvements made.

NAVAL STATION UPON THE COAST OF PORTO RICO.

As required by the naval appropriation act of March 3, 1901, under the head of "Public works, Bureau of Yards and Docks," an examination of the coast and waters of the island of Porto Rico, with reference to the advisability of establishing a United States naval station on said coast, was made, a board having been appointed for that purpose, acting under general instructions from this Bureau. Its report has been received, which recommends the bay of San Juan as the best site for a naval station, and the point of land called the Marina Ward as the best site for the yard proper, which it states should include all land on the Puntilla Point. The present naval station, of restricted area and meager equipment, is located upon this land and would be embraced in the site proposed.

The report is to be transmitted to Congress, and will be forwarded to you for that purpose.

REMOVAL OF HENDERSONS POINT, PORTSMOUTH, N. H.

The removal of this point, which constitutes a serious impediment to navigation between the Portsmouth Navy-Yard and the lower harbor, and has been the subject of report and recommendation, was considered by the last Congress, and the naval appropriation act of March 3, 1901, made an appropriation of $1,000 to enable you to have prepared specifications and obtain proposals from responsible contractors for its removal, so as to improve the approach to the navy-yard to a depth of not exceeding 35 feet below mean low water for a distance not exceeding 350 feet, the proposals to be submitted to Congress at its next session. In pursuance of this provision surveys were made and specifications prepared as soon as possible after the funds appropriated therefor became available.

Public advertisement was issued inviting proposals for the work, and the bids were opened with the following results:

	Item 1.	Item 2.	Item 3.	Item 4.	
				Mud.	Rock.
1. John Peirce, 277 Broadway, New York.	$808,855.00	$620,760.00	$424,729.00	$0.40	$6.50
2. Massachusetts Contracting Co., 12 Marion street, Boston[1]	749,000.00	622,000.00	497,000.00	2.00	7.00
3. R. G. Packard Co., 130 Pearl street, New York[2]	1,050,000.00	783,000.00	497,000.00	.....	.....

[1] Time: Item 1, 12 months; item 2, 10 months; item 3, 8 months.
[2] Time: Item 1, 24 months; item 2, 34 months; item 3, 44 months.

The bids upon item 1 are for the removal of the full 350 feet named in the act as the limit which should not be exceeded. A copy of the plans and specifications, together with a scale of the offers, will be presented for transmission to Congress.

BLYTHE ISLAND, GEORGIA.

In pursuance of the directions contained in the naval appropriations act of March 3, 1901, requiring a report as to the condition and extent of any Government property at Blythe Island, Georgia, whether the title is good, and whether the property is adapted to the necessary wants of the Navy Department; an officer was detailed to visit the property, locate its boundaries, and lay out a rifle range upon the same, provision for which was made in the same act. It was thought at that time that it might be used for a practice ground by the naval training service, but it was finally decided that it was not so well adapted as other localities, and no use of it has thus far been made.

The property is about 1,100 acres in extent, very much of which is marshy, but a tract of upland, well wooded, covers an extent of about 400 acres, and upon this portion the rifle range has been opened.

There are no improvements upon the tract, no efforts in that direction having been made since the property was acquired by purchase in 1856, when $130,000 was paid for it, at the rate of about $120 per acre. The title to these lands is good, having been so reported by the Attorney-General of the United States.

The property can be availed of as a place for rifle practice, and for drill by the training squadron, when it is considered desirable to send it to those waters; but there does not appear to be any present necessary want for its use. It is adapted for the uses above indicated, however. It is cared for without cost to the Government by a custodian, and might well be retained for needs which may arise upon that part of the coast.

The act mentioned appropriated $2,000 for the necessary surveys and examinations, but no portion of this has been expended in the work.

TRANSFER OF PORT ROYAL NAVAL STATION.

The board of officers appointed by you, as authorized and directed by the act of June 7, 1900, to examine into the expediency of changing the naval station, Port Royal, S. C., to some point at or near the city of Charleston, S. C., made its report under date of January 10, 1901, recommending a site at a point about 6 miles above the city of Charleston, on the west bank of the Cooper River. This report was trans-

mitted by you to the chairman of the Committee on Naval Affairs, United States Senate, on January 11, 1901, and is printed as Senate Document No. 86, Fifty-sixth Congress, second session.

By act of March 3, 1901, Congress authorized the transfer of the Port Royal station to the site selected, and negotiations which had been going on from the first were brought to a head as soon as practicable. Some difficulty was experienced in reaching an agreement as to the price to be paid for certain portions of the property held by private citizens, but a satisfactory conclusion was finally arrived at, and after the necessary investigation of the title had been made by the United States attorney, deeds were executed on the 12th day of August, 1901, transferring to the United States three tracts of land, comprising 258.11 acres, 171.03 acres, and 760 acres, respectively, the first two in fee simple and the last for "the site, location, and purposes of a naval station," in consideration of the payment of $50,000, $34,206, and $1, respectively.

Possession of the property was taken on behalf of the United States on the date of the execution of the deeds, and arrangements were made for the care and protection of the property pending the detail of an officer or representative of the Department to take charge.

In the meantime, the question of a general scheme of improvement of the station was submitted to a board of officers, of which Rear-Admiral H. C. Taylor is senior member, and its report has just been received and will at once be examined by the Bureau, after which steps will be taken to carry out such recommendations as are approved and for which funds are available.

Operations at Port Royal have been limited to repairs necessary to preserve the public property.

The Bureau is now carrying on negotiations looking to the purchase of about 948 acres of marsh land lying on the east bank of the Cooper River, opposite the site of the Charleston Station. This tract can be purchased at this time for a very reasonable price, $1,000, and is very desirable, in order that the Department may more satisfactorily control the water front.

* * * * * * *

OFFICE ROOM.

Work in the Bureau has been hampered by a lack of sufficient room. Three years ago all the work in the Bureau was done in this building and all its force was engaged herein. To-day more than one-half the office force is quartered in a building upon Seventeenth street, so great has been the growth of the work, with no room in this building for the expansion. Both of the officers, who are technical assistants, are also installed upon Seventeenth street. This dispersion of the force operates to the great disadvantage of the Bureau. The records of the Bureau, to a very large extent, have had to be removed to give room for other purposes, and large quantities are now stored in the Washington Navy-Yard, where they are not so safe as in this building, and are very inconvenient for reference, which sometimes becomes necessary.

A building conveniently located, into which all the records not current could be deposited and arranged for easy reference, would relieve the congestion somewhat, but the Bureau believes that this building is no longer able to properly contain the three executive departments now occupying it.

The papers which accompany this report are as follows:

No. 1. Report of expenditures (material and labor) at navy-yards and stations during the fiscal year ended June 30, 1901.
No. 2. Detailed report from navy-yards and stations of expenditures (material and labor) under appropriation "Repairs and preservation, navy-yards and stations," during the fiscal year ended June 30, 1901.
No. 3. Detailed report from navy-yards and stations of expenditures (material and labor) under appropriation "Maintenance, yards and docks," during the fiscal year ended June 30, 1901.
No. 4. Detailed reports from navy-yards and stations of expenditures under appropriation "Civil establishment, Bureau of Yards and Docks," during the fiscal year ended June 30, 1901.
No. 5. Report of expenditures under appropriation for salaries for Bureau of Yards and Docks during fiscal year ended June 30, 1901.
No. 6. Statement of appropriations for Bureau of Yards and Docks, showing amounts appropriated, obligated, and remaining unobligated June 30, 1901, under each specific head of appropriation.
No. 7. Statement of offers received during the fiscal year ended June 30, 1901, for works of improvement under the cognizance of the Bureau of Yards and Docks, as required by section 429, Revised Statutes.
No. 8. Summary statement of estimates received from navy-yards and stations for fiscal year ending June 30, 1903.
No. 9. Detailed statement of estimates received from navy-yards and stations for works of improvement for fiscal year ending June 30, 1903.
No. 10. Detailed statement of estimates received from navy-yards and stations for "Repairs and preservation" for fiscal year ending June 30, 1903.
No. 11. Detailed statement of estimates received from navy-yards and stations for "Maintenance" for fiscal year ending June 30, 1903.
No. 12. Detailed statement of estimates received from navy-yards and stations for "Civil establishment, yards and docks," for the fiscal year ending June 30, 1903.
No. 13. Detailed statement of estimates submitted by the Bureau for the fiscal year ending June 30, 1903.
No. 14. Tabulated statement showing the character, value, and condition of buildings at navy-yards and stations June 30, 1901.

Very respectfully.

MORDECAI T. ENDICOTT,
Chief of Bureau.

The SECRETARY OF THE NAVY.

REPORT OF THE CHIEF OF THE BUREAU OF EQUIPMENT.

WASHINGTON, D. C., *October 1, 1901.*

SIR: I have the honor to submit a report of the operations of the Bureau of Equipment for the fiscal year ending June 30, 1901, with the annual estimates for funds for the service of the fiscal year ending June 30, 1903.

The appropriations under the cognizance of the Bureau and its various branches available for use during the fiscal year were as follows, viz:

Naval act, approved June 7, 1900.

Equipment of vessels	$2,600,000.00
Depots for coal	700,000.00
Increase of the Navy, equipment	400,000.00
Ocean and lake surveys	100,000.00
Contingent equipment	25,000.00
Equipment plant, Philippine Islands	20,000.00
Civil establishment	19,052.52
Naval Observatory (grounds and roads)	12,500.00
Total	3,876,552.52

Deficiency act, approved March 31, 1901.

Equipment of vessels	$1,350,000.00
Coal barges	150,000.00
Equipment plant, Philippine Islands	30,000.00
Water boat	25,000.00
Contingent equipment	2,500.00
Total	1,557,500.00

Deficiency act, approved January 4, 1901.

Observation of eclipse of the sun, May, 1901	$10,000.00

Act making provision for emergencies in river and harbor works, etc., approved June 6, 1901.

Survey for the improvement of a harbor at the island of Guam	$10,000.00

Legislative, executive, and judicial act, approved April 17, 1900.

Salaries, Bureau of Equipment	$10,640.00
Salaries, Naval Observatory	37,520.00
Contingent and miscellaneous expenses, Naval Observatory	16,750.00
Salaries, Nautical Almanac Office	22,900.00
Salaries, Hydrographic Office	100,858.00
Contingent and miscellaneous expenses, Hydrographic Office	39,100.00
Pilot charts, North Pacific Ocean	2,000.00
Total	229,768.00

SUMMARY.

Equipment of vessels	3,950,000.00
Depots for coal	700,000.00
Increase of the Navy, equipment	400,000.00
Ocean and lake surveys	100,000.00
Contingent equipment	27,500.00
Civil establishment	19,052.52
Coal barges	150,000.00
Water boat	25,000.00
Equipment plant, Philippine Islands	50,000.00
Salaries, Bureau of Equipment	10,640.00
Salaries, Naval Observatory	37,520.00
Contingent and miscellaneous expenses, Naval Observatory	16,750.00
Grounds and roads, Naval Observatory	12,500.00
Salaries, Nautical Almanac Office	22,900.00
Salaries, Hydrographic Office	100,858.00
Contingent and miscellaneous expenses, Hydrographic Office	39,100.00
Pilot charts, North Pacific Ocean, Hydrographic Office	2,000.00
Observation of eclipse of the sun, May, 1901	10,000.00
Survey for improvement of a harbor, island of Guam	10,000.00
Total	5,683,820.52

It being apparent before Congress adjourned that the original appropriations under "equipment of vessels" and "contingent equipment" would not be adequate for the needs of the Bureau during the entire fiscal year, deficiency estimates amounting to $1,350,000 for the former and $2,500 for the latter were submitted. These sums were allowed by Congress and made the appropriations of the Bureau sufficient for its purposes during the fiscal year, with a small surplus, the amount of which can not at present be stated.

Naval Coal Depots.

The following progress has been made in establishing naval coal depots:

Naval station, Hawaii, H. I.—The two slips and two piers under construction at this naval station at the date of the Bureau's last report have been completed. These slips and piers can be used by the heaviest draft ships and, in connection with the coal sheds at the station, afford excellent facilities for supplying coal and water to Government vessels and also for loading and discharging colliers. The installation, however, of improved but simple coal-handling appliances to be worked by steam power will make the depot more effective.

A supply of fresh water, sufficient for present purposes, has been obtained by means of sinking an artesian well on the grounds of the station and piping the water to the piers.

When not required for the use of navy ships or army transports, merchant ships are permitted to use these slips and piers. The sum of $7,439.42 was turned into the Treasury last year, being the amount received from the latter vessels as dock dues.

Pearl Harbor, Hawaii, H. I.—The necessity of establishing at the Hawaiian Islands an adequate naval station for use as a naval base and for the repair and maintenance of ships of war in connection with such naval operations in the Pacific as may be necessary, has been recognized by Congress. The naval appropriation bill, approved March 3, 1901, provides, under the Bureau of Equipment, a sum of $150,000 for the purpose of acquiring land for a naval station and for harbor and channel defenses at Pearl Harbor. The owners of the land desired having refused to entertain propositions for its sale, the Bureau, acting under instructions from the Department, has directed the commandant of the naval station to take steps to have a tract of land condemned for the site of a naval station.

In accordance with the request of the Department the Attorney-General has directed his representative at Honolulu to fully assist the naval authorities in this matter.

Naval station, Tutuila, Samoa.—The progress toward completion of the coaling plant at this naval station has been slow owing, as stated in last year's report, to the character of the foundations for the coal shed and pier, particularly the latter. The change made in the location of the pier in order to secure a suitable foundation necessitated considerable dredging, which has caused a long delay by reason of the necessity of forwarding from the United States suitable materials and a dredging plant. It is confidently expected, however, that all work will be completed before the end of the present calendar year.

An appropriation was made last Congress for the purpose of extending the shed capacity to about 25,000 tons, and for the installation of adequate appliances for handling the coal. This appropriation will be expended under the cognizance of the Bureau of Yards and Docks since Tutuila has been advanced from a naval coal depot to a naval station. This Bureau has supplied harbor buoys, lights, and moor-

ings at the request of the commandant for the purpose of aiding navigation in entering and leaving port, particularly at night. It has already become a port of call for the regular line of steamers running between San Francisco and Australia, these steamers formerly calling at Apia, Upolu.

NAVAL STATION, ISLAND OF GUAM.—An act approved June 6, 1900, making provision for emergencies in river and harbor works for certain surveys, etc., contained the following:

SEC. 6. That the Secretary of the Navy is hereby authorized and directed to appoint two naval officers and the Secretary of War one engineer officer to constitute a board whose duty it shall be, under the direction of the Secretary of the Navy, to make a survey, plan, and estimates for the improvement of a harbor at the island of Guam; and the sum of ten thousand dollars, or so much thereof as may be necessary, is hereby appropriated, out of any money in the Treasury not otherwise appropriated, for this purpose.

In accordance with instructions from the Department the expenditure of the $10,000, above mentioned, was placed under the supervision of this Bureau. The board appointed consisted of Capt. John F. Merry, U. S. N., Maj. John Biddle, Corps of Engineers, U. S. A., and Lieut. Albert M. Beecher, U. S. N. The board convened at Guam on the 28th day of November, 1900, and continued its operations until the 28th day of March, 1901, when the members sailed for San Francisco by way of Manila. The report of the board was completed at San Francisco on July 25, 1901, and includes recommendations, plans, and estimates for—

(1) The improvement of the harbor of San Luis d'Apra, including the establishment of port warden lines.

(2) The location and establishment of a naval base and coal depot, including the necessary buildings, water supply, sewerage system, etc.

(3) The necessary defenses of the port in detail.

(4) The necessary public works to constitute a commercial port of call for merchant ships.

Reference is made to the preceding reports of this Bureau as to the great importance of this harbor from a military point of view.

The Bureau is now in a position to proceed with the construction of an adequate coal depot based upon a comprehensive scheme, suitable for a harbor for mercantile and naval purposes, well located for protection against destructive storms, and fortified against possible enemies. Other public works, including dredging, the establishment of a light-house, etc., should progress at the same time. The dredging, in fact, should be commenced first of all.

It is earnestly recommended that the importance of this harbor, when improved and made suitable for a naval base and coal depot, also as a harbor of refuge and for repairs and supplying coal to merchant vessels, be brought to the attention of Congress.

NAVAL STATION, CAVITE, P. I.—The large number of ships present at the naval station, Cavite, for repairs has necessitated the removal, during the past year, of all coal stored within the limits of the naval station in order to increase the available space of this station for mechanical work. A large area at Sangley Point, near by, previously occupied by the Spanish naval authorities, has been fenced off for coal-depot purposes, and all supplies arriving are stored there in the open. Supplies consumed have been drawn from the navy-yard, so that at the present time but a small amount of coal remains there.

Reference was made in the Bureau's report of last year to certain plans and specifications for a coaling station at Sangley Point submitted to a board of officers. This board reported in favor of a plant entirely different in design, and as it met with the Bureau's approval, advertisement for bids has been made and they will be opened on the 3d of December next. Six months' time was granted to bidders in order that they might send their representatives to Manila to examine the site should they deem it expedient. It is anticipated that the Bureau will be able to accept a bid for a coal-storage plant with a capacity of about 45,000 tons of coal and simple but efficient power coal-handling appliances.

ISLAND OF CEBU, P. I.—Efforts have been made through the War Department to obtain a site for a coal depot at Cebu within a territory previously occupied by the Spanish naval authorities, but thus far without success. A coal depot at this locality would be of much advantage to ships operating in the waters of this vicinity, and it is hoped that sufficient land may yet be obtained for its establishment.

OTHER POINTS IN THE PHILIPPINE ISLANDS.—Coal depots have been established at other points as required for the small vessels throughout the archipelago. As yet they are mostly in an unsatisfactory condition.

One is located at Port Isabela, Basilan Island. Another at Polloc, island of Mindanao. At the two last-mentioned places the Spanish authorities had small naval stations, and under the authority of the Department a few repairs have been made to them. Sheds of native construction for the protection of coal are built at slight expense.

YOKOHAMA, JAPAN.—Under the authority of the Department the construction of a coal depot at this point was begun in November, 1900, and completed in April, 1901. The work was in charge of the United States naval attaché at Tokyo, Japan, Lieut. A. L. Key, U. S. N., who is entitled to much commendation for its very satisfactory conclusion. The old sheds on the property were rebuilt and new ones constructed sufficient to cover the entire area available. The capacity of this depot is sufficient, it is thought, for the use of ships in this locality. Upon completion the depot was promptly stocked with American coal which has been supplied to ships visiting Yokohama or its vicinity.

PICHILINQUE BAY, MEXICO.—The work of reconstructing this depot was begun in November, 1900, and completed in April, 1901. It was under the charge of Commander W. L. Field, U. S. N., commanding the U. S. S. *Ranger*, the latter a surveying ship and conducting hydrographic surveys in the vicinity. Commander Field was ably assisted by the officers of the *Ranger*. The construction was thoroughly done under many difficulties, on account of the meager facilities at hand in this locality. Commander Field was informed of the appreciation of the Bureau of his successful work.

The shed and pier were thoroughly reconstructed and a simple design of coal-handling apparatus installed. A water reservoir was built for the purpose of storing water for use for fire purposes, for ships, and for the keeper's house. The depot has been stocked with American coal and is now available to supply passing ships, as required.

Arrangements have been made through the State Department with the authorities of Mexico which will enable the Bureau to replenish

the stock of this depot from time to time, as required, without the payment of customs dues. In case the coal is carried by naval colliers the Mexican authorities will also not require the colliers to visit a regular port of entry or to pay the usual port charges. The depot is in charge of the United States vice-consul, who acts as the paid agent of the Bureau.

WEST INDIES.

San Juan, P. R.—A pier has been constructed at the naval station, San Juan, P. R., for use in landing coal and other stores. No building, however, for protecting coal from the rapid deterioration caused by the climate has been constructed, and no appropriation exists for this purpose. The appropriation referred to in the report of last year was used for the construction of the pier. All coal stored at this station is in the open. The new pier, however, enables coal to be landed, and renders a coal hulk at this station no longer necessary, as formerly. In the meantime a coal shed has been designed, which will be erected when funds are available for the purpose. Its construction, as are other public works at this station, is under the cognizance of the Bureau of Yards and Docks. It is urged that funds be provided forthwith, since naval vessels will frequently visit San Juan without regard to whether a large naval station is built there or not.

It is much to be regretted that little progress has been made in securing sites for other coal depots in the West Indies. It is particularly essential that some of the deep-water ports of Cuba should be made available for this purpose. The entire waters surrounding Cuba are most important in a strategic sense, and supplies of coal should be near at hand.

ATLANTIC COAST OF THE UNITED STATES.

Frenchmans Bay, Maine.—Reference is made to the last annual report of the Bureau for the condition of this coal depot up to October 1, 1900. Bids were opened October 23, 1900, for the construction of complete modern appliances for handling and storing coal. A month later a contract was signed by the Bureau with Messrs. Snare & Triest of New York, the successful bidders, for the completion of the above-mentioned appliances in fifteen months' time. Work was begun at once, and at the date of this report no serious obstacles have been encountered toward carrying out the original designs. Good progress has been made, and, unless unusual weather conditions prevent, the plant should be completed within the contract time.

The contract includes the construction of a granite and steel coal house of 10,000 tons capacity, calculated on an average storage depth of 15 feet; a steel coaling pier 400 feet long and 48 feet wide, the front face of which is in 30 feet of water at extreme low tide; and coal-handling machinery of the most modern type. As the rise and fall of the tide on this coast is sometimes as much as 15 feet, the problem of constructing a suitable pier for the use of large ships was a difficult one. The piles used are steel tubes filled with concrete and protected from oxidation on the outside by concrete. It is believed that the design of this pier is original, and that it will be more durable

and satisfactory than any now in existence on the coast of the United States. It will be thoroughly protected by ice breakers and wooden cluster piles.

The grounds of this depot will be prepared for the use of crews of visiting ships, both for drill and recreation. The excellent landlocked anchorage of large extent in front of the depot will, no doubt, render it a favorite rendezvous for a squadron during the summer season.

NAVY-YARD, PORTSMOUTH, N. H.—A contract has been entered into for the construction at this navy-yard of a coaling plant of 10,000 tons storage capacity. This being a naval station, its construction is under the cognizance of the Bureau of Yards and Docks. The commencement of the work will be delayed for some months—although appropriations have long been available—on account of other improvements on the water front near where it will be located. It is urgently needed.

NAVY-YARD, BOSTON, MASS.—Work has just commenced on a coal-storage plant for this navy-yard, with a capacity of about 11,500 tons. The work is under the cognizance of the Bureau of Yards and Docks. The plant is admirably located alongside of a deep-water slip, where coal can be supplied very rapidly to the largest ships of the Navy. Colliers can also discharge with great facility. Coal can be drawn from storage and delivered at various parts of the navy-yard by means of a railway system. No greater improvement of this navy-yard has been recently undertaken than the construction of these appliances.

NARRAGANSETT BAY, R. I.—At the close of the last annual report of the Bureau negotiations were in progress, as stated, for the purchase of a site for a naval coal depot at Portsmouth Grove, R. I., comprising 148 acres of land. Acting under instructions from the Department the Bureau successfully concluded the purchase, and complete specifications were prepared for a coaling plant of the most modern and advanced type. Proposals were requested in March of the present year and bids opened May 14 following.

The plans and specifications received proved to be very complete. The contract was awarded to Mr. Augustus Smith, of New York, on June 24, and the primary work of construction commenced as soon as the contract was signed. Fifteen months are allowed for the completion of the plant, dating from August 6, 1901.

The contract includes the construction of a steel coal shed of 10,000 tons capacity, embodying entirely new features of design; a granite and steel coaling pier, capable of accommodating the heaviest draft ships alongside; the installation of coal-handling machinery of the most modern type and of large capacity. The facilities for delivering coal to all classes of ships, torpedo boats, auxiliaries, and barges have received the most careful attention. Small craft will be supplied by gravity as fast as the coal can be taken. Coal can be received for storage by water or by the New York, New Haven and Hartford Railway.

A stream of good water flows through the grounds of the depot. It is proposed to construct a reservoir by building a dam, on a former mill site, for the purpose of supplying water for the use of visiting ships and also for depot use.

The water front and grounds of this depot afford ample room for an extension of shed and pier capacity.

The fresh-water system above mentioned empties into a shallow tidal basin of considerable area within the grounds of the depot and forms an excellent place for the establishment of a torpedo-boat depot. A board of officers, recently appointed by the Department, has recommended this site for such use, and plans have already been prepared for the necessary excavations and constructions.

The wide expanse of good anchorage afforded by the neighboring waters, its excellent protection in bad weather, the ease with which it can be approached from sea, and its geographical location, all unite to make this coal depot one of the most important on the eastern Atlantic coast.

Naval Station, New London, Conn.—This depot has been much used by small vessels during the past year. To make it more efficient, coal pockets or bunkers of moderate capacity have been constructed on the pier for the purpose of supplying torpedo boats and small craft rapidly. Incidentally, it also prevents the necessity of raising steam on the power plant every time one of these small vessels requires coal.

The appliances for storing coal at this depot were the first built, and are capable of improvement, which is contemplated in the near future.

Navy-yard, New York, N. Y.—Appropriations amounting to $160,000, under the cognizance of the Bureau of Yards and Docks, are available for the construction of a coaling plant at this navy-yard. A pier for use in connection with coal-storage facilities is now in process of erection.

Navy-yard, League Island, Pa.—An appropriation of $50,000, under the cognizance of the Bureau of Yards and Docks, is available for the construction of a coal-storage plant at this navy-yard. It is proposed to expend this sum chiefly in the erection of a suitable pier where ships can remain when receiving or discharging coal. The latter will be stored in the open until more funds are available for the construction of a proper building.

Navy-yard, Washington, D. C.—An appropriation of $40,000, under the cognizance of the Bureau of Yards and Docks, has been available for the erection of a coal storage plant at this navy-yard for some time. Plans have been prepared and proposals are about being asked by advertisement.

Coal for steaming purposes is not kept on hand to any extent in the city of Washington, and it is necessary for the Department to secure its own supplies of coal for ships and tugs that are stationed at the navy-yard, and also for visiting vessels.

For some time past the Bureau has urged the necessity of expediting the construction of suitable means for the above-mentioned purpose. The delay has been chiefly due to difference of opinion as to the proper location of the plant.

Navy-yard, Norfolk, Va.—The coal shed at this navy-yard is an old wooden structure with a capacity of about 2,500 tons. It is entirely

without appliances for handling coal, except by barrows and carts, as formerly the custom. A complete modern plant, with a storage capacity of about 5,000 tons and an inexpensive modern type of coal-handling apparatus, is recommended.

While large amounts of coal are shipped near by, which can be depended upon for supplying coal by the cargo or to ships of war, facilities at the navy-yard are necessary for storing and delivering coal to the various departments and to tugs and other small craft.

PORT ROYAL, S. C.—Since the last annual report of the Bureau the naval station at this place has been converted into a training station and coal depot by the Department. A certain portion of the station was assigned by recommendation of a board for the storage of coal.

The Bureau proposes, with the approval of the Department, to utilize the buildings thus allotted for the purpose of providing proper coal-storage facilities. With the exception of a small wooden shed, built many years ago and capable of storing only 600 tons, this station has thus far been without means of protecting coal from the weather. It will be necessary to construct wharf facilities, also a power plant for handling coal rapidly. Funds are on hand, under the cognizance of the Bureau of Yards and Docks, sufficient for this purpose.

NAVAL STATION, KEY WEST, FLA.—The coal depot at this naval station was fully described in the annual report of the Bureau for last year. The appliances installed have been very useful during the past year. There is now capacity for about 20,000 tons, which can be quickly transferred to and from ships. The appliances now available would have been of very great service had they existed during the Spanish war. It is contemplated to improve them somewhat, in accordance with the latest designs in use elsewhere.

DRY TORTUGAS, FLORIDA.—During the past year the custody of the fort at Dry Tortugas has been transferred by the War Department to the Navy Department for use as a coal depot, and by the latter Department to this Bureau. The building for the distilling apparatus, with standpipe and other accessories in connection with supplying water to naval ships, has been completed. The construction of piers and dredging has been under contract, under the cognizance of the Bureau of Yards and Docks, for the past three years. Progress on the dredging is slow, and, although nearly completed, little work has been done during the past year. The materials for pier construction are on the spot. Owing, however, to differences with the contractor, no work on these piers has been done during the past year; a new contract is about to be made. The coal-storage houses are completed, as stated in the Bureau's last annual report.

It is much to be regretted that the construction of the necessary facilities for the use of this important coal depot should be protracted to such an unusual extent. A completion is hoped for at an early date.

A small garrison of marines is now in charge of the fort.

NAVY-YARD, PENSACOLA, FLA.—The pier and coal-handling appliances referred to by the Bureau in its last annual report have been completed by the Bureau of Yards and Docks. A small appropriation under that Bureau exists for increasing the storage capacity of the station.

NAVAL STATION, ALGIERS, LA.—An appropriation of $150,000 exists, under the cognizance of the Bureau of Yards and Docks, for providing the necessary appliances for handling and storing coal at this naval station. Owing, however, to the present very limited water front of the station, that Bureau is desirous of acquiring additional land before locating the coal pier and its accessories. The acquisition referred to is delayed by the slow action of the courts.

PACIFIC COAST OF THE UNITED STATES.

DUTCH HARBOR, ALASKA.—No progress has been made in establishing a coal depot at this point. The Treasury, War, and Navy departments have requested the Interior Department to reserve a lot of land on the water front for the use of each Department, respectively. None has been assigned to the Navy Department, and plans and specifications can not be prepared until such assignment is made.

SITKA, ALASKA.—A contract was made by the Bureau in July last with Mr. George E. James, of Juno, Alaska, for the construction of a coal shed of 2,500 tons capacity, on Japonski Island, for the purpose of storing coal for naval use. A wooden pier already exists, and the transportation of coal will be provided for by means of simple but adequate steam machinery of a modern type. An early completion of this work is anticipated.

NAVY-YARD, PUGET SOUND, WASHINGTON.—An appropriation to the amount of $115,000, under the cognizance of the Bureau of Yards and Docks, is available for the construction of a coal-storage plant at this station. As the Puget Sound Navy-Yard is the only one available for docking and repairing the largest ships on the Pacific coast, some means of maintaining a coal supply for their use is of great importance. The yard, however, is small, and its water front is not bold, therefore a thoroughly good site for the construction of a coaling pier alongside of which heavy ships can be moored is not available.

For this reason the Bureau caused surveys to be made of lands near by which were for sale, but the result, so far as finding a favorable site is concerned, was not successful. Upon further consideration it has been finally decided to locate the coal house and pier near the western limit of the water front of the navy-yard, where the land is favorable, but which will require the construction of a long pier and more or less dredging. The Bureau of Yards and Docks has been requested to proceed with the construction of this work with as much expedition as possible. Owing to the absence of good coal anywhere in the vicinity of the Pacific coast a storage capacity at this station of at least 25,000 tons is absolutely necessary. The present appropriation is not sufficient for this purpose, and it is earnestly recommended that additional sums be granted.

NAVY-YARD, MARE ISLAND, CAL.—The construction of coal sheds of about 7,500 tons capacity at this navy-yard, referred to in the last annual report of the Bureau, has not been completed. For the same reason cited in the Bureau's statements in connection with the Puget Sound Navy-Yard there should be at this navy-yard a capacity for storing not less than 25,000 tons of coal, with thoroughly efficient appli-

ances for the rapid and economical handling of the same. The construction of these public works is under the cognizance of the Bureau of Yards and Docks, and its appropriations for this purpose are, in the opinion of the Bureau, inadequate.

It is respectfully recommended and urged that an additional sum be granted by Congress for the immediate completion and extension of the present facilities for storing and handling coal at this navy-yard.

MISSION ROCK, SAN FRANCISCO BAY, CALIFORNIA.—Referring to its two previous annual reports, the Bureau has to state, in addition to the information given therein, that a decision was reached in the district court of San Francisco early in the present calendar year to the effect that Mission Rock was the property of the United States Government. It followed, in accordance with an Executive order, that it was therefore at the disposal of the Navy Department.

The California Dry Dock Company, however, the other party to the suit, appealed the case to the judicial circuit court. The latter rendered a decision reversing in part the decision of the lower court, viz, that while the original small islets were the property of the General Government, the filling in about them and surrounding them was the property of the California Dry Dock Company. It would appear by this decision that a Government island can be rendered inaccessible for Government use by parties receiving title to tide-water flats from the State. The case has been appealed to the Supreme Court, where it is now pending.

In the meantime a survey of the islands and structures thereon and the waters immediately adjacent has been made, and the Bureau is now in position to prepare plans and specifications for a coaling plant to be located on this site. Its importance, fully described in preceding reports, is constantly being made more apparent.

SAN DIEGO, CAL.—The War Department, at the request of the Navy Department, has transferred to the latter during the past year a section of the Point Loma military reservation at San Diego, Cal., for the purpose of establishing thereon a naval coal depot. The final steps of the transfer have but recently been completed. In the meantime a thorough survey has been made of the locality by the U. S. S. *Ranger* for the purpose of obtaining sufficient data for the preparation of plans and specifications for the necessary structures for a naval coal depot.

The geographical position of this harbor, its immediate proximity to the frontier of the United States, and the prospect in the near future of extensive harbor improvements make it exceedingly valuable as a coaling station. The harbor itself is absolutely land locked and at present affords at low tide a depth of about 22 feet of water on the bar. It is confidently expected that this will be increased in the near future sufficiently to permit the entrance of battle ships. Even at present battle ships can anchor outside, off Coronado Beach, where it is sufficiently smooth, except during a few days of each year, for uninterrupted coaling from barges or colliers.

OTHER COAL DEPOTS.—As the Department is aware, efforts are being made to establish other naval coal depots at important localities which it is deemed unwise to discuss in a report of a public character.

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ESTIMATES.

The estimates for the fiscal year ending June 30, 1903, are herewith submitted.

Very respectfully,

R. B. BRADFORD,
Chief of Bureau.

The SECRETARY OF THE NAVY.

REPORT OF THE CHIEF OF THE BUREAU OF NAVIGATION.

DEPARTMENT OF THE NAVY, BUREAU OF NAVIGATION,
Washington, D. C., October 1, 1901.

SIR: I have the honor to present herewith a report of the Bureau for the fiscal year ending June 30, 1901, and to inclose a report (A) showing the movements, condition, station, and service of all vessels of the Navy for the fiscal year ending upon that date, and reports of officers in charge of the various establishments under the control of the Bureau, as follows: (B) of the Chief Intelligence Officer; (C) of the Superintendent of the Naval Academy; (D) of the Commandant of the Naval Training Station, Newport, R. I.; (E) of the Commandant of the Naval Training Station, San Francisco, Cal.; (F) of the Governor of the Naval Home, Philadelphia, Pa.; (G) of the Commanding Officer of the *Amphitrite;* (H, K, L, and M) of the Commanders in Chief of the Asiatic, North Atlantic, Pacific, and South Atlantic Stations; and schedule (N) of estimates for the support, during the coming fiscal year, of the Bureau and all those establishments for which appropriation is made under the Bureau.

OPERATIONS OF THE FLEET.

During the year which closed June 30, 1901, squadrons have been assigned as follows:

North Atlantic under Rear-Admiral Norman H. Farquhar until April 25, 1901, and from that date to the end of the year under Rear-Admiral Francis J. Higginson; the South Atlantic under Rear-Admiral W. S. Schley until April 13, 1901, and from that date under Rear-Admiral Bartlett J. Cromwell until July 6;[1] the Pacific under Rear-Admiral Albert Kautz until January 28, and from that date under Rear-Admiral Silas Casey; the Asiatic under Rear-Admiral George C. Remey, with Rear-Admiral Louis Kempff as senior-squadron-commander until May 1, 1901. On May 1 Rear-Admiral Frederick Rodgers arrived on the station, assuming the duty of senior-squadron-commander, Rear-Admiral Kempff thus becoming junior-squadron-commander.

The assignment of vessels to the various commands has been largely influenced during the past year, as it was during the year which preceded it, by the necessities of the Asiatic Station on account of the

[1] On July 6 Rear-Admiral Cromwell proceeded to the European Station, of which he assumed command on July 31, with the *Chicago, Albany,* and *Nashville* as a squadron, thus reestablishing the European Station, for which no vessels have been detailed since April 11, 1898.

unsettled conditions there, both in China and the Philippines. The closing of active operations in China and the wane of the insurrection in the Philippines during the latter part of the year allowed several vessels to be detached from this station and ordered to various navy-yards in the United States, to be placed out of commission for a thorough overhauling, rendered necessary by extended cruising and lack of proper repairing facilities on the station. Two vessels were also detached from this station in order to reestablish the European Station. It is hoped that the above-mentioned reduction of the Asiatic Station will permit the commissioning of at least two training ships and an increase to the force of the North Atlantic Station of two gunboats, and possibly to that of the Pacific Station of one gunboat also. Owing to the lack of vessels of smaller types in the North Atlantic Squadron, it has been necessary to divert training vessels from their cruises of instruction in order to afford necessary protection to our interests, particularly in the Caribbean Sea, and this, in the opinion of the Bureau, emphasizes the necessity of commissioning at least two light-draft gunboats for this squadron. The *Alabama*, which was placed in commission on October 16, 1900, added a powerful battle ship to the North Atlantic Station, and the commissioning of the *Wisconsin* in February added a similar vessel to the Pacific Station. The battle ships on the North Atlantic Station now number three, and, with the addition of the *Illinois* in the early autumn, will be increased to four, a number which, the Bureau believes, should at all times be retained in commission on that station, as being a tactical group, and further necessary from the standpoint of adequate preparation for defense. The *Oregon*, recently returned from the Asiatic Station, is now at the navy-yard, Puget Sound, for repairs which will occupy a considerable time. This vessel has not been placed out of commission, but is kept in reserve with a reduced crew. In addition to the foregoing, two practice ships for naval cadets, the battle ship *Indiana* and the sailing ship *Chesapeake*, have made summer cruises, of which further mention will be made, and the training of apprentices and landsmen has been carried on at sea with ten vessels, and the gunnery training vessel has also been maintained. In addition, survey work on the coast of Cuba has been carried on by the *Yankton*, *Vixen*, and *Eagle*, and on the coast of Lower California by the *Ranger*.

NORTH ATLANTIC STATION.

During the autumn of 1900 the British North American squadron was received at Bar Harbor, Me., by the vessels of this squadron, it being the first visit of a British squadron to the United States for several years. From Bar Harbor the fleet proceeded to Newport, where, in consultation with the War College, tactical maneuvers in conjunction with the army at Fort Adams were undertaken. During the operations the submarine boat Holland demonstrated many interesting points concerning her value as a war vessel. In the winter the squadron cruised in the Gulf of Mexico, with Pensacola as its headquarters, where exercises with landing forces and various boat drills were constantly held. Later the vessels cruised in the Caribbean Sea, proceeding as far east as Porto Rico and touching at Kingston, Jamaica, en route from Culebra to New York. The usual cruise along the Windward Islands and the north coast of South America was omitted

on account of the length of time spent in the Gulf of Mexico. During the past summer Nantucket and Vineyard sounds were the scenes of the cruises of this squadron, a part of the coast not previously visited by the vessels of the fleet. Valuable hydrographic knowledge has been gained concerning this hazardous locality. The successful landing of two 5-inch guns with facilities carried on board ship was a noteworthy part of the exercise of the landing force at Great Point, Nantucket Island.

One of the interesting events that occurred on this station was the voyage of the *Scorpion* up the Mississippi River as far as Memphis. The following are the ports at which this vessel touched: New Orleans, La.; Baton Rouge, La.; Natchez, Miss.; Greenville, Ala.; Memphis, Tenn.; Arkansas City, Ark.; Helena, Ark.; Vicksburg, Miss.

During the year the *Bancroft*, *Machias*, and *Scorpion*, in addition to making various surveys, were called upon to be present at certain South American and Central American ports to protect American interests endangered by political disturbances ashore.

SOUTH ATLANTIC STATION.

During the early part of the fiscal year the *Wilmington* was detached from this station and ordered to the Asiatic Station, being replaced by the *Atlanta* on December 4, 1900. The *Chicago* and *Atlanta* cruised between Buenos Ayres and Rio, touching at various other ports. In July the *Chicago* was detached from the station and ordered as flagship of the European Station, leaving the *Atlanta* the sole representative of this Government in South Atlantic waters. It is the belief of the Bureau that the South Atlantic Station should be reenforced at an early date by at least two vessels. The cordiality with which our vessels are always received in this part of the world is evinced in various ways, among which one particularly attracted attention, namely the courteous removal of certain quarantine restrictions against our men-of-war when entering Montevideo Harbor from infected ports, provided there is no sickness on board.

PACIFIC STATION.

The vessels of this station have cruised together on the coast of California and in Puget Sound. The *Marblehead* was placed out of commission on April 30, 1900. The *Wisconsin* was placed in commission on February 4, 1901, and joined the squadron on April 19, 1901. The *Philadelphia* remained in commission for duty on the station, and on June 21, 1901, sailed from San Francisco for Samoa, by way of Honolulu, carrying a draft of men for the *Abarenda* and certain necessary supplies for the naval station at Tutuila, Samoa. This is the first time that a man-of-war has visited the Samoan Islands since the inauguration of the present government. The *Philadelphia* had previously cruised as far south as Valparaiso, leaving San Francisco December 5, 1900, and touching at Magdalena Bay, Acapulco, Puerto Viejo, Panama, and Callao on the way south, and at Callao and Acapulco on the way north, arriving at San Francisco on March 23, 1901.

EUROPEAN STATION.

The European Station was reestablished on July 19, 1901, by the arrival of the *Chicago* at St. Vincent, Cape Verde Islands, under

orders for that purpose. On July 3, 1901, the *Albany* and *Nashville* sailed from Cavite with orders to report to Rear-Admiral Cromwell by cable upon arrival within the limits of the European Station. The squadron assembled at Genoa, Italy, on September 24.

ASIATIC STATION.

Operations on this station have been marked by practically uniform success. The conduct of our sailors and marines in China was, in the main, all that could have been asked for, and the disintegration of the insurrection in the Philippines, which followed close upon the heels of the capture of Aguinaldo, has to a great extent relieved the tremendous pressure for officers and men on this station under which the Bureau has been laboring for the past two years.

Concerning the naval operations in China there is little further to state, as the Bureau's report for 1900 covered most of the important events. Soon after the occupation of Pekin by the relieving column of allies the naval force at Taku was sensibly diminished. The *Monocacy* remained in this vicinity during the entire winter, going into a mud dock in the Peiho River. The *New Orleans* also remained in North China waters, rendering assistance to the army and carrying mails from Japan to Chefoo and Shan-Hai-Kwan. In this connection the Bureau is gratified to record the facility with which mails for our soldiers and sailors in China were handled by the postal authorities, special postal employees being sent to China for that purpose. Special acknowledgments are also due to the Postal Telegraph and Cable Company, which volunteered to send messages to and from soldiers and sailors in China at one-half the regular rates.

The commander-in-chief kept in touch with the situation by placing the monitors *Monadnock* at Shanghai and *Monterey* at Canton, and other vessels at various points along the coast where called for by consular officers on account of disturbed conditions, or where deemed necessary by him for the proper understanding of the whole situation. The troubles having finally almost altogether subsided, there remain of these only the *Monterey* and *Monadnock*, stationed permanently at Shanghai and Canton.

Among the incidents which might be mentioned in connection with the campaign for the relief of Pekin during the summer of 1900 the Bureau takes great pleasure in calling attention to the case of two British seamen, Herbert George and Edward Turner, who, at the risk of their lives, rescued a junk loaded with wounded American seamen. Although the Department was unable to award medals to these men, there being no authority in law for such an award, the Bureau is gratified to record that the Life Saving Benevolent Association of New York, with great generosity, furnished the Department with gold medals which were forwarded through the Department of State to these men, with letters suitably recognizing their heroism upon the occasion. The Department has already, in its General Orders, No. 55, published to the service the names of those whose distinguished conduct in this campaign merited such recognition, and the Bureau does not therefore feel called upon to mention them, as was intimated was its desire in its last annual report.

The campaign in the Philippines, so far as concerns the Navy, has consisted almost entirely in cooperation with army expeditions against

the insurgents, upon which, as evidenced by the reports of all army officers concerned, the naval vessels rendered invaluable assistance. A further check upon the insurgents has been the rigid system of patrol carried on by the smaller gunboats, which has materially hampered the inflow of arms and ammunition to the islands. Among the many expeditions which might be mentioned, the one for the capture of Aguinaldo, in which the *Vicksburg*, commanded by Commander E. B. Barry, U. S. N., took part, must be considered as undoubtedly the most successful. General Funston in his report states that without the services of the *Vicksburg* he could have done little or nothing. By the force of this vessel he was quietly and expeditiously landed in the middle of the night at Kasiguran Bay. The *Vicksburg* then proceeded to sea before daybreak. Upon the return of the expedition, after the capture of Aguinaldo, the *Vicksburg* was again brought near the coast in a masterly and seamanlike manner without the slightest intimation of her destination being given to the insurgent forces in the vicinity. In a word, the whole expedition was conducted with an amount of success which can only be attained by the highest discipline and efficiency of all concerned.

The happy conclusion of the expedition above referred to seems to have been the turning point of the insurrection, and acting upon the reports coming from this station the Bureau recommended to the Department the detachment of the following vessels from the squadron and their return to the United States: The battle ship *Oregon* to the naval station, Puget Sound; the cruisers *Bennington*, *Petrel*, and *Concord* to the navy-yard, Mare Island; the collier *Brutus* to New York and the supply ship *Culgoa* to Boston; the cruiser *Newark* to the navy-yard, Boston; the cruiser *Castine* to the navy-yard, League Island; the cruiser *Marietta* to the navy-yard, Portsmouth, N. H.; and further, the *Albany* and *Nashville* were later detached and ordered to the European Station.

On November 16, 1900, the island of Guam, which had formerly constituted a division of the Asiatic Station, was detached from this station owing to the desirability of placing it directly in communication with the Department. The Bureau regrets to record the loss on November 17, 1900, of the *Yosemite*, the station ship at this island. The vessel was blown to sea by a terrific storm. Both anchors were down, but in spite of this and the use of her engines the ship dragged ashore, and then the wind suddenly changing its direction she was driven to sea. The injuries received proved fatal, although the vessel was kept afloat for about forty hours by the almost superhuman efforts of her officers and crew, drifting about 50 miles. In the meantime the collier *Justin*, commanded by Merchant-master William K. Scott, which was fortunately in the harbor of San Luis de Apra at the time, put to sea, the storm having somewhat abated, and by the exercise of the greatest good judgment found the *Yosemite* and rescued her officers and crew. The vessel, however, sunk while an attempt was being made to tow her back to port. The Department has in its General Orders, No. 24, expressed its appreciation of the high courage shown upon this distressing occasion by all concerned.

The preparatory work for the selection of a site for a naval station in the Philippines has been carried on by the officers of this fleet, and a site has finally been decided upon at Olongapo, in Subic Bay, and practically coincident with that selected by the Spanish Government.

VESSELS ON SPECIAL SERVICE.

The *Prairie*, which in 1899 carried the Government exhibit to the Paris Exposition, left on November 3, 1900, for Havre to bring back this exhibit. Upon arrival at Havre, November 14, 1900, the *Prairie* proceeded to Rouen, where all articles were successfully loaded and returned to the United States, the *Prairie* leaving Havre on January 10, 1901, and arriving in New York on January 24. After unloading there a portion of her cargo she proceeded to Baltimore, Md., and unloaded the remainder. From Baltimore the vessel was sent to the navy-yard, Boston, to be placed out of commission for transformation into a vessel for the training of landsmen.

The *Michigan* during the past year took out the naval militia organizations of the States of Ohio and Illinois, and in addition has done survey work on the lakes, which is of importance to lake interests. The *Yankton*, *Vixen*, and *Eagle* have been employed in resurveying certain harbors and anchorages of the coast of Cuba. The *Yankton*, upon the completion of the season's work there, proceeded to Porto Rico and carried about that island a naval board organized in accordance with the act of Congress and charged with the selection of a suitable site for a naval station in Porto Rico.

The *Concord* was on June 10 detached from the Asiatic Station and proceeded to Alaska for the purpose of rendering assistance to certain geological survey parties at work along the shores of Bering Sea and the Arctic Ocean, and to render any assistance which might be necessary to the governor of Alaska for the purpose of maintaining and administering the Government. The unfortunate sickness of her commanding officer rendered it necessary for the *Concord* to proceed to Seattle without accomplishing the objects in view, but on August 3, 1901, the vessel returned to Bering Sea and there remained during the latter part of the season in the performance of so much of this duty as could be accomplished.

The *General Alava*, on the Asiatic Station, was temporarily diverted from her ordinary duties to carry parties from the Naval Observatory and from the Smithsonian Institution from Manila to Sumatra in order to observe the eclipse of the sun, which was considered would be best viewed from this point. The vessel left Cavite on March 27 and arrived at Padang, Sumatra, on April 5, and on her return voyage left Padang May 27 and arrived at Cavite June 8.

NAVAL COLLIERS.

The system of manning naval colliers with merchant crews, which was successfully inaugurated by this Bureau during the last fiscal year, was continued during the present year and was specifically recognized by Congress in an appropriation for the maintenance of naval colliers. There are now in commission on this service the *Arethusa*, *Alexander*, *Saturn*, *Nero*, *Justin*, *Pompey*, *Leonidas*, *Hannibal*, *Cæsar*, and *Ajax*. It is the desire of the Bureau that all vessels not strictly men-of-war shall be manned in this manner.

The appropriation for the maintenance of the collier system was in the last naval appropriation act placed under the Bureau of Equipment, but as by direction of the Department the handling of the collier fleet has been placed under this Bureau, it is recommended that the appropriation for the ensuing year be requested under this Bureau.

TRAINING OF APPRENTICES.

During the past year the two stations for the training of apprentices—i. e., Newport, R. I., and San Francisco, Cal.—have been considerably benefited by the erection of several new buildings and by the completion of various other improvements, all of which are mentioned in the reports of the respective commanding officers, hereto appended.

At the training station, Newport, the Department has placed the gunboat *Newport*, which is to act as a training ship for gunnery exercises of the apprentices, and also as an adjunct to the petty officers' school, of which mention will be made further on. During the early part of the year the *Fortune* was assigned to the gunnery training duty there, but this vessel not having proved of sufficient size to accommodate the largely increased force at the station, the *Newport* has been substituted and the *Fortune* detached and placed under repairs at the navy-yard, Boston. The *Hist*, a small converted gunboat, has also been ordered to the training station to assist the *Newport*.

At Newport the number of apprentices has been larger than ever before in the history of the institution, on June 30, 1901, 1,128 boys being present. At San Francisco the same has been the case, where, in addition to 230 landsmen for training, 250 apprentices were present on June 30.

The training squadron for apprentices has, owing to the repairs necessary upon the old type of vessels which it comprises, been slightly reduced, the *Alliance* having been placed out of commission in June, 1900, and the *Vicksburg* having been sent to the Philippines in response to an urgent call from Rear-Admiral Remey for more vessels. The vessels left were the *Monongahela* and the *Essex* on this coast and the *Adams* on the Pacific coast. These vessels' cruises were as follows:

The *Monongahela* left Newport, R. I., on June 30, 1900, making a cruise to Europe, and returning to this country on November 17, 1900. She again left Newport on December 27, 1900, making a cruise to the West Indies, and returning to Hampton Roads June 10, 1901.

The *Essex* left Newport, R. I., June 6, 1900, making a cruise to Europe, and returning December 20, 1900, again leaving Newport on January 23, 1901, for the West Indies, and returning to the United States June 26.

On the Pacific coast the *Adams* completed a cruise in Puget Sound, which was already in progress at the beginning of the fiscal year 1901, and on September 17, 1900, left San Francisco for a cruise to the Hawaiian Islands, Lower California, and to various Californian ports, from which she returned on March 21, and then was placed out of commission owing to necessary repairs.

THE TRAINING OF LANDSMEN.

The policy of enlisting landsmen from various parts of the United States, and of training them in cruising training vessels for service on regular men-of-war has been pursued by the Bureau as heretofore, but with considerably increased facilities. The authorization by Congress of 5,000 additional men led the Bureau to inaugurate a system of recruiting which had of late years been practically neglected, that is, the use of recruiting parties. During the past year recruiting parties under various officers have been dispatched to various parts of the United States in the Mississippi Valley and to the eastward, the success of

which has been uniform. Landsmen to the number of 4,198 have been enlisted; of these 3,141 men have been transferred, first, to receiving ships, and then to the training squadron for landsmen, to which the following are the vessels assigned: The *Hartford*, *Lancaster*, *Buffalo*, *Dixie*, and *Alliance* on the Atlantic coast; *Mohican* and *Alert* on the Pacific coast. The success of this method having proved undoubted, the Bureau has now undertaken a scheme having a still wider scope, that is, the establishment of a training station for landsmen to which these men shall be sent instead of to the receiving ships as at present. The receiving ships have been in many cases overcrowded by the receipt of recruits enlisted by recruiting parties. These latter enlistments have caused the number of men on board receiving ships to be largely in excess of the number previously on board, because in former years practically all recruiting had been done by these vessels.

In casting about for a suitable locality for a training station for landsmen and for a place which would not require the expenditure of too great an amount for preliminary establishment, the happy solution was found by occupying the naval station, Port Royal, S. C., about to be abandoned by the Department in favor of a navy-yard at Charleston, S. C. The advantages of the station at Port Royal are unquestioned. The weather during the whole year is comfortable for outdoor drills and exercises. Its situation upon a beautiful sheet of water, Port Royal Sound, is an added advantage. One difficulty which the Bureau was obliged to meet—the lack of suitable water supply—has been overcome by the purchase of an artesian well which was dug on Paris Island, adjacent to the station, and which will, by a system of piping about three-quarters of a mile in length, give a copious supply of water to the station. Various buildings which on account of the transfer of the station to Charleston must necessarily have been abandoned will, after suitable changes have been made, be utilized as barracks for the landsmen. The *Topeka*, a vessel formerly employed in the cruising training service for landsmen, has been assigned to the station as station vessel and for purposes of making short cruises in Port Royal Sound and to sea.

The *Wasp* has also been assigned to this station for the purpose of giving the landsmen practice with small-caliber rapid-fire guns and for such other service as may be useful. The station when completely equipped will accommodate about 1,000 men, and its facilities will be increased as rapidly as practicable in order to afford the greatest possible relief for the present overcrowded condition of the receiving ships.

At Norfolk the Bureau has also increased the facilities for the accommodation of landsmen, a drill ground having been provided on the St. Helena property and the *Sylvia*, a small converted gunboat, having been attached to the *Franklin* for the purpose of training men so far as practicable on a vessel of this type.

In addition to the vessels already assigned to the training squadron for landsmen, the Department has assigned the battle ship *Indiana* to this duty, and is also about to commission the *Prairie*, now under repairs at Boston, and the *Panther*, under repairs at League Island, making in all 10 vessels so employed. It is believed that by this system about 3,500 men a year can be comfortably handled and so well trained that a majority can be transferred to active service in the rating of ordinary seamen, and with such a good foundation in seamanship and the duties of a man-of-war's man that they can soon be promoted

to higher rates. It would seem that this will for the present meet the needs of the service for the lower ratings of enlisted men of the line.

THE GUNNERY TRAINING SYSTEM.

The Bureau has continued in operation its plan for the training of seamen to be gun captains. The *Amphitrite*, which is the vessel detailed for this duty, has since my last report completed a training of two classes, 58 men having by this method been qualified as gun captains and transferred to the various cruising ships as such. The men so qualified have been almost uniformly found to be efficient and serviceable. A certificate as gun captain is not issued to a man unless he shows ability as a leader of men in addition to his qualifications as a gun pointer. As is shown by the report of the commanding officer of the *Amphitrite*, the condition of that vessel is such that it will shortly be necessary to replace her by another ship or to repair her extensively. During the year the *Amphitrite* has had attached to her as a tender the *Osceola* from July 1, 1900, to March 5, 1901, and from that date the *Peoria*, this change in vessels being necessitated by the needs of the Department for tugs; the *Osceola*, being a very powerful vessel, was properly detailed for her legitimate duty, and the *Peoria*, which was a steam pilot boat converted to a gunboat, was substituted.

As has been stated in the previous reports, it has been the desire of the Bureau to establish a gunnery training ship on the Asiatic Station, but hitherto the demands for men in the Philippines have been so great and pressing that the scheme could not be put on a working basis. There are present on the Asiatic Station the two monitors, the *Monadnock* and the *Monterey*, which the Department will be obliged to retain in Asiatic waters for many considerations, and the Bureau proposes in the near future to place one of these vessels on this duty.

Owing to the active cruising duty which the Department has required from practically all ships in the Navy during the past year, it has been impracticable to give a fair trial to the general order which was prepared by the officers of the *Amphitrite* as a course of gunnery training for cruising ships. The Bureau is contemplating the desirability of directing that this order shall only be executed by vessels immediately after going into commission and before joining a squadron. It is considered that this will in all probability be a suitable preparation for squadron duty and will add greatly to the efficiency of ships which complete the course.

During the past year the Bureau has purchased for use of the service an instrument devised by Lieut. J. B. Blish, U. S. N., for the purpose of better plotting target practice. This has been tried on the *Amphitrite* and has been reported upon as being very satisfactory. One dozen of the instruments are now about to be issued to the service for further trial. If these are satisfactory a further and larger issue will be requested from the Department.

The Bureau has also purchased from the manufacturers in England ten aiming machines of the pattern designed by Capt. Percy Scott, R. N., and which present to the gunner a moving target simulating the apparent movements of the vessel to be fired at. These are about to be placed on board various ships, where they will receive a thorough trial, and if they are satisfactory, others will be purchased.

SCHOOL FOR PETTY OFFICERS.

During the past year the Bureau has had attached to the naval training station the gunboat *Newport*, for the purpose of training of petty officers. The question of providing a requisite number of petty officers to meet the needs of a rapidly increasing enlisted force has become most serious, and in the opinion of the Bureau could only be met by the establishment of a school to which seamen and first class apprentices who show aptitude for command can be sent to obtain such instruction as will enable them to become efficient petty officers in the minimum time. The course is progressive, men being sent to the school either from training ships or as soon as they reenlist. Upon completion of the course many of the men will be transferred to the *Amphitrite* for a further course in gunnery instruction. The system is in its incipiency, but is rapidly developing into a useful adjunct to the service.

TORPEDO BOATS IN RESERVE.

During the past year the Bureau has inaugurated a system of reserve commission for torpedo boats. In the autumn of 1900 the Department attempted to place in commission, and attach to the North Atlantic Squadron, a section of torpedo boats which had been hauled out on the ways at the navy-yard, New York. Owing to circumstances which were beyond the control of the Bureau the attempt to commission them was finally abandoned, but as soon as the vessels were ready to leave the yard they were sent to the navy-yard, Norfolk, and were there assembled as a section of seven boats in a reserve commission. On one of the boats, the *Porter*, a full crew was maintained, and on each of the other boats a permanent detail of four men. The boats were taken out for a run under their own steam at least once a month, and under this regime their condition has sensibly improved. The early completion of fifteen or twenty more of these boats will necessitate the establishment of about four of these sections, and it is proposed that they shall be placed one each at the navy-yard, Norfolk, at the Port Royal Naval Station, at Charleston, and at Pensacola during the winter. It is hoped that by spring the various stations which are now under construction for the torpedo boat bases will be completed and that the boats can then be placed at these.

BARRACKS.

The poor facilities for the housing of recruits of which the Bureau has made mention in its reports during the past two years have finally culminated in the forced withdrawal from this service of the receiving ship *Vermont*. Early in the present calendar year the Bureau was in receipt of reports from this vessel which indicated a serious impairment in her sanitary condition. In the opinion of the medical officer of this ship the vessel was overcrowded from a sanitary standpoint and probably had been in this condition for years. Under the circumstances satisfactory measures to destroy the disease germs could not be undertaken. At a somewhat subsequent date, when the condition of affairs became much more serious owing to the death of several recruits from spinal meningitis, it became necessary to abandon the *Vermont* and to substitute for her the steel cruiser *Columbia*, then in reserve at the navy-yard, League Island. The *Columbia* was towed to

the navy-yard, New York, and although she has not sufficient accommodations to be at all suited to the duty of a receiving ship, still, by sending many recruits to other yards than New York, and by transferring men as rapidly as practicable to seagoing ships, she has, under these conditions, met requirements so far. This situation, however, can not obtain for a much longer time. The other old wooden receiving ships are undoubtedly in a condition which approximates to that of the *Vermont*, and in the near future it will be necessary to abandon all of them. Such an eventuality can only be met by the immediate erection of barracks for the reception of recruits and other men who for various reasons can not for the time being be attached to seagoing ships.

Two years ago the Bureau, in its annual report, presented a strong argument in favor of the adoption of barracks for the housing of all enlisted men of the navy not on board seagoing ships, and now that the Department is confronted with the actual necessity for the adoption of this system it may be well to present again a few of the necessities as well as the advantages of this system.

By the erection of barracks the overcrowded condition which has hitherto pertained upon receiving ships will be entirely avoided. All conditions which add to the sanitary quartering of men will be much bettered; light, heat, and fresh air will be more evenly and generally distributed. A large saving to the Government will ensue from the adoption of this system, since for its maintenance a much smaller sum is required than for the maintenance of the present system of receiving ships. As stated in the Bureau's report of 1899, the permanent crews of the present receiving ships, including the *Vermont*, cost the Government $297,000 per annum, and with half of the number of men which are sufficient to care for these vessels, barracks, which would accommodate a much larger number of recruits, could be cared for. In other words, there would be an annual saving to the Government of nearly $150,000. This sum is the interest on about $5,000,000, an amount twice as great as that which the Bureau would estimate for the construction of barracks having a total capacity of 6,000 men. In the opinion of the Bureau it has now become an absolute necessity that barracks for enlisted men should be provided in the vicinity of the following navy-yards: New York, League Island, and Mare Island, and, as recommended in the report above referred to, barracks of the following capacities should be immediately constructed:

Navy-yard, New York, 2,000 men.
Navy-yard, League Island, 1,000 men.
Navy-yard, Mare Island, 1,000 men.

The considerable expansion which the Navy has already undergone in the matter of enlisted force, and the future needs of the service being taken into consideration, it is believed that it will be for the best interests of the service that in most cases barracks be not constructed immediately within the limits of a navy-yard, but at some point conveniently adjacent. The large number of ships which will shortly be in commission will undoubtedly require an addition to the capacity of the workshops in all of the navy-yards, and the barracks if erected in navy-yards will unquestionably occupy room much needed by other departments. Navy-yards are not suited for the proper housing of recruits; for such men considerable room is needed in order to provide suitable grounds for recreation and for drill, and this room can not be obtained in a navy-yard. It is of great benefit to recruits to

obtain a certain amount of military training before they are transferred to seagoing ships. There is no one thing which adds more to the efficiency of a man on board ship than a proper sense of military discipline, and this is best obtained by actual drill in ranks, for which, as stated above, there are poor facilities in navy-yards. The Bureau would therefore recommend that these barracks be erected on ground suitably adjacent to yards and in such position that vessels coming into the harbor upon which the respective yards are situated can, if necessary, leave a large number of their crew in the barracks before proceeding to the yard; this, it is believed, would prove of considerable benefit to the ships' companies.

It is recommended that Congress be asked to appropriate at its next session for seamen's quarters near the New York, League Island, and the Mare Island navy-yards. For New York an appropriation of $800,000 is needed; for League Island and Mare Island, $400,000 each, the total appropriation for barracks thus recommended amounting to $1,600,000. In case it is decided to place barracks outside of the navy-yards, suitable locations must also be purchased. It is probable, however, that it will be necessary to purchase only one site, that is for the station near the navy-yard, New York, as the navy-yards, League Island and Mare Island, contain so much land that suitable localities for placing barracks thereon can probably be found.

The Bureau considers the above to be one of the most necessary items for the proper maintenance of the health of the enlisted force. if the old receiving ships are maintained in their present condition they will soon become the foci of disease from which will radiate to all parts of the world sickness of many varieties.

The report of the chief of the Bureau of Medicine and Surgery, upon the finding of a board ordered to investigate the condition of the *Vermont*, states that "the vessel is not only unfit now, but no amount of cleaning or disinfection will ever make it suitable for use again as a receiving ship. The vessel should be immediately abandoned and sold, and some other vessel, preferably one of steel construction, be used in place of the *Vermont* until proper barracks, the necessity for which becomes now apparent, can be built on the cob dock." To retain the *Vermont* under such circumstances would be to encourage the dissemination of disease throughout the service by the transfer of men from this ship to cruising ships. If this be the case on the *Vermont*, it must necessarily be the case on vessels of a similar type, and the Bureau feels that it can not put itself upon record too strongly as to the absolute necessity at the present moment of beginning a construction of modern sanitary barracks for the accommodation of men not on board seagoing ships. This practice has already been adopted by every nation which considers itself a power on the seas. It is apparent that some prejudice against such a course has arisen in certain quarters. It is stated that the training of seamen should begin on board a ship, but as was mentioned in the Bureau's report of last year, such a contention can only arise from ignorance of the true merits of the case. Receiving ships are not in any way ships in the proper sense of the word; they are merely floating houses, or hulks. On board them no drill is possible which tends to the instruction of the recruit in his profession as a seaman. It is the intention that in barracks recruits shall be housed in a manner similar to that now in use on board receiving ships; they will swing in hammocks, and will be subject to the usual routine of a ship of war.

NAVAL INSTITUTE.

The Bureau desires to again express its appreciation of the assistance rendered the service during the past year by the United States Naval Institute, which has published the Gun and Torpedo Drills of the United States Navy to take the place of the Gunnery Drill Book of 1893. This book filled the long-felt want in the service and the edition is a great credit to the Institute, a handy and useful volume having been produced.

INTERIOR ADMINISTRATION OF THE BUREAU.

During the past fiscal year 49,022 numbers were given to documents received in the Bureau and sent out from it. This is an increase of nearly 6,000, or quite 12 per cent over that of the fiscal year ending June 30, 1900, and represents a corresponding increase in the work of the office force of the Bureau. It will shortly become impossible for the present force to successfully cope with the work before it. The lack of office room for the working force of the Bureau is being more heavily felt each year. The files of the Bureau are increasing so rapidly that they are now encroaching upon the space needed for this work. Such a condition should not continue, as it is not to the interests of the Department, and can not be productive of the best work of which the clerks are capable. The Bureau calls the attention of the Department to the conscientious and earnest work which all in its establishment have done during the past year, in spite of the conditions above referred to.

On account of the largely increased work of the office which has charge of the records of enlisted men, the Bureau requests that an estimate be made for an increase in its clerical force of two clerks, Class C, $840 per year, to take charge of this work.

The following tables give statistics for the enlisted force for the year ending June 30, 1901:

	Men.	Apprentices.	Total.
Applied for enlistment	32,311	6,687	38,998
Rejected for physical disability	8,877	2,587	11,464
Rejected for other causes	14,765	1,958	16,723
Disqualifications waived	209	22	231
Failed to enlist	763	383	1,146
Total number enlisted	8,115	1,781	9,896

Number in service June 30, 1901, with citizenship.

	Native born.	Naturalized citizens.	Aliens, declared intention.	Aliens, resident of the United States.	Aliens, nonresident.	Native born.	Foreign born.	Total.
PETTY OFFICERS.								
Four years	2,239	1,192	166	36	18	.....	.....	3,651
Three years	580	327	83	8	7	.....	.....	1,005
Apprentices	.....	.....	.....	.....	.....	119	13	132
Total	2,819	1,519	249	44	25	119	13	4,788
MEN.								
Four years	7,024	1,026	772	310	491	.....	.....	9,623
Three years	700	152	152	45	53	.....	.....	1,102
Apprentices	.....	.....	.....	.....	.....	3,113	199	3,312
Total	7,724	1,178	924	355	544	3,113	199	14,037
Grand total	.....	.....	.....	.....	.....	.....	.....	18,825

Sixty-one per cent of petty officers are native born, 32 per cent are naturalized, 5 per cent have declared intentions, 1 per cent are aliens resident in the United States, 1 per cent are aliens nonresident, and 93 per cent are citizens of the United States; 72 per cent of the men are native born, 11 per cent are naturalized, 9 per cent have declared intentions, 3 per cent are aliens resident in the United States, 5 per cent are aliens nonresident, and 83 per cent are citizens of the United States; 94 per cent of the apprentices are native born and 6 per cent are foreign born; 73 of the whole enlisted force are native born, 15 per cent are naturalized, 6 per cent have declared intentions, 2 per cent are aliens resident in the United States, 4 per cent are aliens nonresident, and 83 per cent are citizens of the United States.

Discharges, desertions, and deaths.

	Men.	Apprentices.	Total.
Discharges:			
Expiration of enlistment	3,302	122	3,424
Disability	380	189	569
Services no longer required	49		49
Own request	7		7
Request of commanding officer	2		2
Bad conduct	176	35	211
Illegal enlistment	15	5	20
Inaptitude	13	157	170
Undesirable	92	22	114
Purchase	143	158	301
Total	4,179	688	4,867
Desertions	2,893	265	3,158
Deaths	102	16	118

Continuous service:	
Men serving under continuous service June 30, 1901	3,412

Landsmen for training.

Enlisted during the year ending June 30, 1901	3,141

	Alliance.	Buffalo.	Dixie.	Hartford.	Lancaster.	Mohican.	Topeka.	Total.
Received from receiving ships	216	971	678	379	136	268	332	2,980
Received from training ships		527	94	441	304			1,366
Received from other sources								
Total received	216	1,498	772	820	440	268	332	4,346
Transferred to cruising vessels		851	203					1,054
Transferred to training ships		516	59	339	70		135	1,119
Transferred to receiving ships	6	35	45	26	16	11	46	185
Transferred to crew roll		10	13	1				24
Discharged			53	6	29	1	15	95
Deserted	1	8	112	156	100	84	65	526
Died		1	2	2				5
Total	7	1,421	487	530	206	96	261	3,008
Number on board June 30, 1901	209	77	285	290	234	172	71	1,338

Number at present afloat under training, about	1,800

Two thousand and twenty-eight landsmen for training have been transferred to cruising vessels since the adoption of this class of enlistment.

About 94 per cent of the whole number of landsmen for training are native born.

During the fiscal year 17 deaths have occurred among officers on the active list and 31 on the retired list, a total of 48. During the same period there have been 38 retirements, 36 resignations (inclusive of 24 naval cadets), and 1 discharge from the service. Four naval cadets have been dropped or dismissed.

Nineteen appointments have been made in the grade of assistant surgeon and 7 in that of assistant paymaster. Other appointments have been 1 professor of mathematics and 2 civil engineers. The number of warrant officers has been increased by the additional acting appointments of 7 boatswains, 19 gunners, and 10 carpenters.

The commissions issued during the past fiscal year number upward of 1,100, and about 345 warrants have been issued to former acting warrant officers whose fulfillment of certain requirements of the service entitled them to permanent appointments.

Under the provisions of the act of Congress approved March 3, 1899, providing for retirement of enlisted men of the Navy, 17 enlisted men availed themselves of the benefits of the said act during the fiscal year ending June 30, 1901.

During the fiscal year ending June 30, 1901, there were received 79 applications for service pensions.

Seventy-two claims were allowed and 10 were rejected.

Thirteen claims were pending July 1, 1900, and 10 pending July 1, 1901.

Claims pending July 1, 1900	13
Applications received during fiscal year 1900–1901	79
Total	92
Claims allowed during fiscal year 1900–1901	72
Claims rejected	10
Claims pending July 1, 1901	10
Total	92

The act of Congress approved March 3, 1901, making appropriation to supply deficiencies in the appropriations for the fiscal year ending June 30, 1901, etc., contained a proviso to the effect that—

> The transportation to their homes, if residents of the United States, of enlisted men and apprentices discharged on medical survey, and the transportation to the place of enlistment, if residents of the United States, of enlisted men and apprentices discharged on account of expiration of enlistment, shall hereafter be chargeable to the appropriation "Transportation, Recruiting and Contingent."

placing the Navy on the same footing with the Army. This necessitates an increase in the estimates of this appropriation of about $80,000.

Invitations for bids for the transportation of enlisted men of the Navy between all naval stations and rendezvous were issued to all railroad and steamship companies and all passenger associations who could furnish such transportation (197). Thirty-five bids were received. Only one bid was received for transcontinental transportation west bound and one east bound, the same route being named in both bids. It was evident that the railroads had combined and that no competitive bids could be obtained for transcontinental transportation. As these bids were very much higher than the Bureau had been paying in previous years, they were rejected and the bidders informed that unless they reduced their bids men would be sent between the Atlantic and Pacific coasts by way of the Isthmus of Panama, which could be done

at far less cost than that named in their bids. The result was that the bids were reduced very materially. The cost was still further reduced by the Bureau's proviso that free reclining chairs should be used for parties of less than twenty between Chicago and Omaha and between St. Louis and Denver. This rate is still higher than the transcontinental rates heretofore obtained by the Bureau, but the route is shorter and the time (five days) so much shorter than that via Panama (forty days) that these bids as modified have been accepted. The contractors for transcontinental transportation during the fiscal year ending June 30, 1902, are the Chesapeake and Ohio Railway Company west bound and the Southern Pacific company east bound, and the route between New York and San Francisco is via Pennsylvania Railroad to Washington; Chesapeake and Ohio Railway to Cincinnati; Cleveland, Cincinnati, Chicago, and St. Louis Railway to Chicago; Burlington Route to Omaha; Union Pacific Railroad to Ogden, and the Southern Pacific Company to San Francisco. During the fiscal year ending June 30, 1901, the routes were: Cromwell Steamship Company, New York to New Orleans, and Southern Pacific Company to San Francisco, this route occupying ten days. When haste was required: Pennsylvania Railroad to Washington; Chesapeake and Ohio Railway to Cincinnati; Cleveland, Cincinnati, Chicago, and St. Louis Railway to Chicago, and the Santa Fe Route to San Francisco, occupying five days.

A note has been inserted in the annual schedule of rates and routes for the transportation of enlisted men making the rates quoted therein applicable for transportation issued upon the order of pay officers of ships without formal transportation requests, which are only issued to shore stations.

The form of Transportation Request has been simplified by the omission of the coupon heretofore attached and substituting therefor a report of the cost of the transportation called for on the request, to be detached and forwarded to the Paymaster-General. The cost of the transportation, which was formerly noted on the coupon, will hereafter be noted on the stub retained by the issuing officer, together with the appropriation to which charged.

ESTABLISHMENTS UNDER THE BUREAU.

OFFICE OF NAVAL INTELLIGENCE.

Capt. C. D. Sigsbee has remained Chief Intelligence Officer.

Attention is particularly invited to the recommendations of the Chief Intelligence Officer on the subject of legislation which would enable the Department, by combining the work of the General Board, War College, and Office of Naval Intelligence, to begin general staff work on a systematic basis, and attention is also invited to the Appendix to the Chief Intelligence Officer's report, in which the grave condition of the personnel of the line of the Navy is made plain.

NAVAL ACADEMY.

Commander Richard Wainwright has remained Superintendent of the Naval Academy, and attention is invited to his report, which describes the various improvements now in progress at the Academy under the authority of Congress. The Bureau recommends that the increased

salary for the professor of physics, which is mentioned in the report, be granted, as well as that for the professor of French and Spanish. The two gentlemen who would be benefited by the increase of pay have served the Government long and faithfully, one for twenty-four years and the other for fourteen years. It would seem that they deserve the small increase recommended. The request for $5,000 to procure apparatus for the instruction of cadets in marine engineering and naval construction is moderate, and one which should undoubtedly be acceded to. The Naval Academy should be second to no other institution in this country in proper equipment for investigating all engineering principles, and particularly those which apply to the construction of ships and marine engines. The renewed recommendation of the Superintendent of the Naval Academy on the subject of the standard of physical examination for cadets meets the approval of the Bureau. The Superintendent's recommendations with reference to the cadets and to a practice ship are quoted below and are heartily concurred in:

That the age of admission be changed so that no cadet should be appointed whose age would be under 15 or over 18 on October 1 of the year they enter the Naval Academy as members of the fourth class. Also, that the course at the Naval Academy shall be four years, and that the cadets shall be graduated as ensigns. The average age when English officers reach commission grade is twenty years and eight months; the average age in our service is about twenty-five years, which is too late for a young man to be made a responsible officer.

I would further recommend the construction of a practice ship for the use of the naval cadets at the Academy. She should be of about 3,000 tons, built of steel, ship-rigged, with modern but low-powered engines. At present there is no vessel suitable for carrying all the naval cadets on the practice cruise, and they are divided between a battle ship and a sailing vessel. This requires that they be shifted in the middle of the cruise, and the maintenance of the two vessels is more expensive to the Government than would be that of one such as is proposed.

The Bureau has recommended to the Department that six civilian instructors for the Naval Academy be estimated for for the ensuing fiscal year. These gentlemen will take the place of line officers now detailed for duty as instructors in mathematics and English studies.

In concluding the subject of the Naval Academy, the Bureau feels called upon to renew its statements of previous years as to the desirability of commissioning cadets at the end of the four years' course, instead of at the end of the six years' course, as is now the case. This is only a matter of justice to the young men concerned, since it places them on an equal footing with the cadets entering West Point at the same date, and further, justly gives to them the pay of officers whose duties they are now called upon to perform, and it will be a great assistance to the Department, since it will be enabled to order these officers to more responsible duty than is now advisable.

NAVAL HOME.

Capt. James H. Sands, U. S. N., remained the Governor of the Naval Home at Philadelphia, Pa., during the fiscal year. His report, which is appended, is approved.

NAVAL TRAINING STATION, NEWPORT, R. I.

The report of Capt. J. J. Hunker, still commandant of the training station, shows that public works at that place have been actively pushed forward during the past year, the new barracks for the boys being completed about November 1, 1900, and the boys moved in.

This building can comfortably accommodate 1,000 boys, and has proved to be a great improvement on the old quarters. Work on the new power house was completed in February, 1901, and work on the new sea wall and mole begun. Attention is particularly invited to the fact stated in Captain Hunker's report that by the expenditure of $150,000 the *Constellation* could be fitted for efficient sea service. It is hoped that, in consideration of the historical interest which surrounds this vessel, Congress will grant an appropriation for this purpose. The Bureau approves the recommendation of the commandant of the station that two sailing brigs of about 150 tons be supplied to the station, but believes that it would be better to construct three vessels of this character. They would be of great assistance in giving the boys primary instruction in seamanship, and could easily be built at one of the navy-yards.

NAVAL TRAINING STATION, SAN FRANCISCO, CAL.

Capt. Henry Glass remains the commandant of this station.

At this station sick quarters for apprentices, storehouse, and stable, authorized by the appropriation of June 7, 1900, have been built and occupied, as have also officers' quarters. Difficulty was found in obtaining an adequate supply of pure water for the station, since the analysis of the water drawn from the artesian well, which was dug there, showed a rapidly increasing quantity of salt. This trouble was overcome by obtaining water from Oakland by the method outlined in the report of the commandant of the station. Owing to lack of vessels for handling landsmen for training on this coast, the Bureau is obliged to send a considerable number to this station. The largest number present at any one time was 266. The number of apprentices at this station is now unusually large, owing to the fact that there is at present on the Pacific coast no vessel for training apprentices, and as this is a condition which seems likely to exist for some time, the Bureau would recommend that, in order to give the boys suitable training before their transfer to cruising vessels, a small brig of about 200 tons burden be provided. This vessel can easily be constructed at one of the navy-yards.

PERSONNEL.

Enlisted force.—The enlisted force of the Navy has received particular attention from the Bureau during the past year.

The Navy ration and the system of messing the men was one of the most important questions to be considered, and for this purpose a board was appointed by the Department, consisting of the following officers: Capt. J. J. Hunker, Medical Inspector W. A. McClurg, Surg. H. G. Beyer, Paymaster John S. Carpenter, Paymaster F. T. Arms, Paymaster W. J. Littell, Lieut. Commander V. L. Cottman, and Lieut. Commander C. J. Badger.

This board, after having considered the reports and recommendations of the commanding officers and other officers of all vessels in commission, and having carefully weighed the considerations attendant upon changes, submitted a detailed report which is approved by the Bureau, and of which the following recommendations are particularly brought to the Department's attention:

First. "That Congress be asked to authorize the payment of ration money for enlisted men by public bill, monthly, to commissary officers

and mess treasurers. This money should not be credited or paid to members of the various messes, as it belongs to the messes and not to individual members thereof; to revise the ration table as recommended; to authorize additional compensation at the rate of $5 per month to marine messmen."

Second. "That the President be requested to prescribe proposed rates of pay for chief commissary stewards, commissary stewards, bakers, and cooks, and to authorize additional compensation at the rate of $5 per month for enlisted men of the Navy detailed for duty as crew messmen."

Third. "That the Department establish the ratings of chief commissary steward; commissary steward; baker, first class; baker, second class; and amend the regulations of 1900 in conformity with the changes recommended."

To further the above recommendations the following legislation is proposed:

Hereafter the navy ration shall consist of the following daily allowance of provisions to each person: 1¼ pounds salt or smoked meat with 3 ounces of dried or 6 ounces of canned fruit, and 3 gills of beans or peas or 12 ounces of flour; or 1 pound of preserved meat with 3 ounces of dried or 6 ounces of canned fruit, and 12 ounces of rice or 8 ounces of canned vegetables or 4 ounces of desiccated vegetables; together with 1 pound of biscuit, 2 ounces of butter, 4 ounces of sugar, 2 ounces of coffee or cocoa or ⅓ ounce of tea and 1 ounce of condensed milk or evaporated cream; and a weekly allowance of ½ pound of macaroni, 4 ounces of cheese, 4 ounces of tomatoes, ½ pint of vinegar, ½ pint of pickles, ½ pint of molasses, 4 ounces of salt, ¼ ounce of pepper, and ½ ounce of dried mustard. Five pounds of lard or a suitable substitute will be allowed for every hundred pounds of flour issued as bread, and such quantities of yeast as may be necessary.

The following substitution for the components of the ration may be made when deemed necessary by the senior officer present in command:

For 1¼ pounds of salt or smoked meat or 1 pound of preserved meat, 1¾ pounds of fresh meat; in lieu of the article usually issued with salt, smoked, or preserved meat, fresh vegetables of equal value; for 1 pound of biscuit, 1¼ pounds of soft bread or 18 ounces of flour; for 3 gills of beans or peas 12 ounces of flour or rice or 8 ounces of canned vegetables, and for 12 ounces of flour or rice or 8 ounces of canned vegetables, 3 gills of beans or peas.

An extra allowance of 1 ounce of coffee or cocoa, 2 ounces of sugar, 4 ounces of hard bread or its equivalent, and 4 ounces of preserved meat or its equivalent, will be allowed to enlisted men of the engineer and dynamo force when standing night watches under steam.

Section 1584 of the Revised Statues of the United States, and so much of the act of May 3, 1880, "making appropriations for the naval service for the fiscal year ending June 30, 1881, and for other purposes," as authorizes the Secretary of the Navy to substitute desiccated tomatoes for desiccated pototoes, are hereby repealed.

Another important question which has received attention has been the statutes on the subject of the discharge of enlisted men. Under present methods the naval appropriation act provides annually a sum of money for the transportation of enlisted men and apprentices to their homes and of enlisted men and apprentices discharged on medical survey for transportation to the place of enlistment, if residents of the United States. It is considered advisable that this legislation be incorporated as an amendment to section 1422, Revised Statutes of the United States, and thus perpetuate the provisions for transportation, rather than have yearly legislation on the subject. The text of the original section has been retained and only so much has been added as provides for the transportation of enlisted men and apprentices to their homes or to the place of enlistment according as their discharges may have occurred by reason of medical survey or expiration of enlistment.

AN ACT entitled "An act to amend section 1422, Revised Statutes of the United States."

That it shall be the duty of the commanding officer of any fleet, squadron, or vessel acting singly when on service, to send to an Atlantic or to a Pacific port of the United States, as their enlistment may have occurred on either the Atlantic or Pacific coast of the United States, in some public or other vessel, all petty officers and persons of inferior ratings desiring to go there at the expiration of their terms of enlistment, or as soon thereafter as may be, unless in his opinion the detention of such persons for a longer period should be essential to the public interest, in which case he may detain them, or any of them, until the vessel to which they belong shall return to such Atlantic or Pacific port. All persons sent home or detained by a commanding officer according to the provisions of this act shall be subject in all respects to the laws and regulations for the government of the Navy until their return to an Atlantic or Pacific port and their regular discharge; and all persons so detained by such officer, or reentering to serve until the return to an Atlantic or Pacific port of the vessel to which they belong, shall in no case be held in service more than thirty days after their arrival in said port; and that all persons who shall be so detained beyond their terms of enlistment or who shall, after the termination of their enlistment, voluntarily reenter to serve until the return to an Atlantic or Pacific port of the vessel to which they belong, and their regular discharge therefrom, shall receive for the time during which they are so detained or shall so serve beyond their original terms of enlistment an addition of one-fourth of their former pay. Whenever men or apprentices who enlisted within the continental limits of the United States are discharged without said limits or at a place therein not the place of their enlistment, in accordance with their written requests, in which they waive all claims to transportation to the place of enlistment, the originals of such request must be signed by the applicant in the presence of a commissioned officer of the Navy, who must also sign said request as witness to such signature; a duplicate of such request must be entered in full after last entry on their enlistment records, and signed and witnessed as provided for in the original. Men or apprentices enlisted within the continental limits of the United States who are discharged within such limits by reason of expiration of enlistment shall be furnished, if they so desire, transportation to the place of enlistment; if discharged within such limits on the recommendation of a board of medical survey they shall be furnished transportation to their homes within the continental limits of the United States. If they enlisted within the continental limits of the United States and are condemned by medical survey while serving beyond said limits, they shall be transferred for discharge to a port within said limits, and upon arrival shall be discharged and furnished transportation to their homes within said limits. If they enlisted within the continental limits of the United States and upon the expiration of their enlistments immediately reenlist on board of the vessel or on the station from which discharged, they shall be entitled to transportation to the place of previous enlistment if discharged by expiration of enlistment, or to their homes as shown on their enlistment records of previous enlistment if discharged by medical survey and provided their homes are within the continental limits of the United States. All persons enlisted without the continental limits of the United States may be discharged on the expiration of their enlistment either in a foreign port or in a port of the United States, or they may be detained as above provided beyond the term of their enlistment, but in no case shall they be entitled to transportation to their homes or to the place of enlistment: *Provided further*, That the shipping articles shall hereafter contain the substance of this section.

Section 1429 provides as follows: "It shall be the duty of every commanding officer of a vessel, on returning from a cruise, and immediately on his arrival in port, to forward to the Secretary of the Navy a list of the names of such of the crew who enlisted for three years, as in his opinion, on being discharged, are entitled to an honorable discharge as a testimonial of fidelity and obedience, and he shall grant the same to the person so designated." The practice, and methods, originally adopted in connection with this section have since been discontinued. Formerly commanding officers submitted a list of men recommended for honorable discharge, and upon its receipt the Bureau issued the honorable discharges. This has not been the case for many years. The ships are supplied with blank honorable discharges, and when the term of service of men expires, and in the opinion of their command-

ing officers their records warrant honorable discharges, they are issued without reference to the Department. The last clause of the proposed amendment is in accordance with paragraph 3, article 882, United States Navy Regulations, and the entire amendment is in accordance with the methods practiced by the Bureau at the present time, under existing law in the naval appropriation act for fiscal year ending June 30, 1902.

To bring the present practice and the Revised Statutes into conformity the Bureau suggests the following legislation:

AN ACT entitled "An act to amend section 1429, Revised Statutes of the United States."

It shall be the duty of every commanding officer of a vessel upon the expiration of the enlistments of men who enlisted for a term of three or four years, or apprentices who enlisted to serve during minority, to issue to such of them as in his opinion are entitled thereto, and are recommended by him, an honorable discharge as a testimonial of fidelity and obedience. When men or apprentices are discharged before the expiration of enlistment upon recommendation of a medical survey for injuries received or disabilities incurred in the line of duty, they shall be given honorable discharges, provided their records warrant the same, but their discharges shall show their physical disabilities.

In concluding the subject of the enlisted force the Bureau begs leave to submit the following statement:

It should be borne in mind that the United States possesses no adequate merchant marine from which to draw seamen for its Navy, and even if we did possess a large merchant marine the class of men it could supply would not meet the requirements of modern men-of-war. Men supplied from a merchant marine, while possessing fair qualification for seamen, must still be specially and thoroughly trained to be of use in a modern ship of war. To the merest tyro in the requirements of the personnel of a modern ship of war it must be apparent that it is no longer possible to improvise or suddenly create on short notice the class of men desired, for the reason that one, two, or even three years must be spent to properly train our modern man-of-war's men. This work must be done in time of peace if we are to be at all prepared when war comes; in other words, if we are to have a properly manned Navy in time of war, we must prepare it in time of peace.

To effect this training, the Bureau should be given the necessary means, namely, suitable ships in which to properly train the enlisted personnel of the Navy and training stations where the men can be assembled and prepared by preliminary instruction and discipline for the fuller training carried out on board seagoing ships.

The system adopted two years ago of enlisting young landsmen and training them for seamen is giving good results, notwithstanding the fact that the Bureau has not had as suitable ships as should be provided, and the demands of the service have not permitted keeping the men under training as long a time as was desirable.

Up to the present time these newly enlisted landsmen have been assembled on board our receiving ships, which do not possess proper facilities for giving them the preliminary training they should receive.

With suitable barracks larger numbers can be properly housed, the young recruits can be kept there for a period of six or eight months, all of this time being drilled, instructed, and disciplined, and their health cared for infinitely better than if housed in old insanitary hulks, all preliminary to the seagoing instruction afloat.

An opportunity will also be afforded of weeding out those who are unsatisfactory, thus avoiding much expense and wasted instruction.

Any system looking to the development of our Navy should avoid the error of not having the personnel keep pace with the material. If we are adding to the Navy each year new ships and new guns, all of the most modern type, we should certainly not fail to provide also the trained officers and men with which they must be manned. The fact should not be lost sight of that it requires a much longer time to produce a naval officer than it does to produce a battle ship.

Mr. H. W. Wilson, a well-known authority upon naval affairs, has stated in a recent article:

> It is useless to provide ships unless there are trained officers and men to take them to sea. In this matter both England and the United States have shown grave want of foresight, increasing their material out of all proportion to their personnel.

To this trenchant statement the Bureau can add nothing.

It is recommended that legislation be enacted providing that the quota of enlisted men and apprentices shall be as follows:

25,500 men and
2,500 apprentices under training at the training station and on board training ships.

This is an increase of 3,000 men, whose training should be begun and pursued during the coming year.

Officers.—The ever-increasing need of line officers has made itself felt with augmented force during the past fiscal year. At no time in the history of the Navy has such a condition held as now exists. If the Department were suddenly called upon to man for war service all the vessels available in the navy-yards, it would be confronted with a requirement impossible to meet. It is a fact that there are not enough line officers of the Navy to man the vessels already constructed. This being the case, the Bureau need scarcely call attention to the state of affairs which will exist in about three years when the vessels now under construction will be completed. In order to make plain the need for officers, the subject must be approached in a logical manner, and to do this we must consider the needs of each ship constructed and under construction. Taking then the sum of the needs of the individual ships, we reach the needs of the service, considering incidentally the need for a reserve, and other reasons which will prevent the total number of officers on the list from actually serving on board ship in time of war. To this end the following is submitted:

Line officers required to man a battle ship.

1 commanding officer.
1 executive officer.
1 chief engineer.
1 navigating officer.
6 turret officers.
2 secondary battery officers.
3 powder division officers.
2 assistants to chief engineer.

17 in all.

In order to make plain that the above table is the lowest possible estimate of officers actually needed on board battle ships, there is fur-

nished the following table showing the number of officers actually placed on board ships of similar displacement by foreign powers:

Nation and ship.	Number of line officers.	Remarks.
England, Barfleur	33	Includes midshipmen.
France, Bouvet	26	Do.
Germany, Kaiser Frederich III	20	In addition to this there are a number of midshipmen not here given.

It will be seen at a glance in comparing the above table with the first table that the Bureau's estimate, *which includes cadets*, is at least 30 per cent smaller than actual conditions now existing in other navies.

In preparing the following tables the Bureau has estimated for the smaller vessels by assigning to them complements of officers such as are actually carried by vessels now in service and of equal displacement. Without going into details it will be readily seen that the Bureau's estimates in these cases are also a minimum. The following tables show the number of officers which would be required on July 1, 1904, to man the ships of the Navy then actually completed, Table A showing the officers needed for vessels which have been commissioned, but which are now out of commission for repairs or in reserve, Table B showing the officers needed for vessels now under construction, but which will be completed by July 1, 1904.

A.

Vessels.	Officers.	Vessels.	Officers.
Texas	15	Boston	10
Columbia	14	Puritan	8
Minneapolis	14	Miantonomoh	8
Baltimore	12	Terror	8
San Francisco	12	Katahdin	6
Newark	12	Mohican	6
Olympia	12	10 torpedo boats	20
Cincinnati	10		
Raleigh	10		215
Detroit	10	25 per cent reserve	53
Montgomery	10		
Marblehead	10	Total	268
Bennington	10		

B.

Vessels.	Officers.	Vessels.	Officers.
Maine	17	Chattanooga	12
Missouri	17	Cleveland	12
Georgia	17	Galveston	12
New Jersey	17	Tacoma	12
Pennsylvania	17	Arkansas	7
Virginia	17	Nevada	7
Rhode Island	17	Florida	7
Ohio	17	Wyoming	7
California	15	16 torpedo-boat destroyers	48
Nebraska	15	15 torpedo boats	30
West Virginia	15	7 submarines	7
Maryland	15		
Colorado	15		447
South Dakota	15	25 per cent reserve	111
St. Louis	12		
Milwaukee	12	Total	558
Charleston	12		
Denver	12	Grand total	826
Des Moines	12		

Attention is invited to the fact that the above estimates do not include officers to man auxiliary vessels which must be used in time of war, such as scouts, *Yale* and *Harvard* type; colliers, supply vessels, refrigerating ships, repair ships, hospital ships; auxiliary gunboats, the *Gloucester* and *Scorpion* type, and many other similar important craft. Allowing without any reserve that 200 officers would be necessary to man these auxiliary vessels, the total number of officers necessary in order to send to sea the navy which Congress has ordered constructed will be 826 plus 200, or 1,026.

It is now necessary to inquire into the status of legislation which provides for the supply of line officers to the Navy, and in setting this forth the Bureau again furnishes conditions as they actually exist. Under the old law and taking the average for the past ten years, there have been each year approximately 31 graduates available to fill vacancies in the line, which, multiplied by $\frac{3}{4}$, to allow for the change in law of last year, will give as a future average about 47 graduates a year to fill vacancies in the line. Since there are created by the personnel act 40 vacancies per year above the grades of junior lieutenant and ensign and since under the present law we can not hope for a higher average than 50 graduates per year to fill vacancies in the line, it must follow that officers in the line will only be increased at the rate of 10 per year, as shown above. Therefore on July 1, 1904, the navy list will be but 30 more than at present, while the number of additional officers necessary will be 1,026, less the total of absolutely all officers now on shore duty (425), or 601.

To such figures the Bureau believes it unnecessary to add further statement.

In the opinion of the Bureau there is but one remedy for this fatal error in our naval policy, and that is to increase the number of cadets at the Naval Academy. The new construction now under way at this station will enable the Government to accommodate comfortably at one time about 800 cadets, and the Bureau believes that the number of cadets at the Naval Academy should number not less than 800. It is believed that it was the intention of Congress when authorizing quarters for such a number of cadets that upon the completion of the works the money expended should not remain idle, but that all cadets which the institution could accommodate were to be educated; and the Bureau believes that the time has come when the intended increase should begin.

To this end the Bureau recommends the following legislation:

Provided, That from and after the passage of this act there shall be allowed at the Naval Academy two naval cadets for every Member or Delegate of the House of Representatives, two for every United States Senator, one for the District of Columbia, and ten at large annually; *Provided further*, That the number of lieutenants in the Navy of the United States shall be three hundred and fifty, and the total number of lieutenants of the junior grade and ensigns shall be six hundred; *Provided further*, That a naval cadet, upon successfully completing his four-year course at the Naval Academy, shall be commissioned an ensign; *Provided further*, That no cadet shall be prevented from being so commissioned by any law limiting the number of lieutenants of the junior grade and ensigns; *And provided furthermore*, That all acts or portions of acts inconsistent with the provisions of this section are hereby repealed.

In opposition to such a marked increase to the appointments to the Naval Academy it might be advanced that a new "hump" would be created. The present law provides for a fixed number of vacancies above certain grades in the service, and by increasing the number of vacancies above each grade in proportion as the grade is increased due

to the commissioning of officers, the possibility of a "hump" will be avoided. Then again this objection could be met by so adjusting standards at the Naval Academy that only classes of a certain size would be graduated in any year, the size to be so arranged as to increase the number of commissioned officers gradually.

In concluding the subject of the officers the Bureau feels it its duty to call the Department's attention to the great injustice done to this country's interests by causing it to be represented abroad by officers of comparatively low rank. Taking into consideration only the navies of the six major sea powers, we find the following condition of affairs:

	Great Britain.	France.	Germany.	Russia.	Japan.	United States.
Admirals	10		2	14	1	1
Vice-admirals	22	15	6	24	7	
Rear-admirals	38	30	15	33	14	18

To cite a single instance, if the United States had been represented by a vice-admiral in Chinese waters during the summer of 1900, his position in the council of allied commanders-in-chief would have been of far greater dignity and weight, and one which would have been much more commensurate with the power and interests of this Government. This country is often placed in a humiliating position on important occasions abroad by reason of the low rank of its naval representatives. Officers take precedence according to rank, and thus our representatives are frequently preceded by those of countries far inferior in power and prestige. The Bureau, therefore, recommends that the grade of vice-admiral be reestablished permanently with four members, reducing the grade of rear-admiral to fourteen, if Congress deems this necessary.

National naval reserve.—In concluding the subject of the personnel, the Bureau feels called upon to bring to the Department's attention the necessity of establishing a national naval reserve, which should be composed of able-bodied men who are or who have been connected with a seafaring life, and incidentally all others who may be deemed well fitted in the opinion of the Department, and who can successfully pass the prescribed examination. To make a naval reserve efficient it is necessary that the men composing it should receive instruction on board cruising men-of-war and for a considerable period each year. The Bureau recognizes the difficulty of accomplishing this, since to take men from their ordinary professions they must be offered a sufficient compensation to pay for the loss of time from their regular work, and the sum which it would be necessary to appropriate to accomplish this seems at first sight large, but the Bureau believes that it would be money well expended. The grave error of failing to provide a sufficient personnel, which has crept into our naval policy, can in some measure be met by the establishment of a suitable naval reserve, and the Bureau recommends that the Department ask Congress at the earliest opportunity to provide for a national naval reserve by passing a bill similar in purport to that recently recommended by the General Board.

Very respectfully,

A. S. CROWNINSHIELD,
Chief of Bureau.

The SECRETARY OF THE NAVY.

REPORT OF THE CHIEF OF THE BUREAU OF ORDNANCE.

DEPARTMENT OF THE NAVY,
BUREAU OF ORDNANCE,
Washington, D. C., October 1, 1901.

SIR: I have the honor to submit the annual report of this Bureau and also to transmit estimates for the fiscal year ending June 30, 1903.

In submitting its annual report the Bureau desires to record on behalf of its chief, its officers, and civil employees their deep sorrow and sincere regret for the recent sad and untimely death of our honored and beloved President, whose virtues in public and private life were a conspicuous example for all to follow.

ESTIMATES.

Fuel, tools, material, and labor; maintenance of proving ground and smokeless-powder factory; for target practice; conversion of 6-inch guns to rapid-fire; reserve supply of ammunition; purchase and manufacture of smokeless powder; new and improved batteries for the *Newark*, *New Orleans*, and *Albany;* traveling cranes and fixtures for storehouse at navy-yard, Portsmouth, N. H.; cranes and machine tools for the ordnance department, navy-yard, Boston; equipment, including cranes, elevators, etc., for the new storehouse on the ordnance dock, New York; machinery and tools for the naval gun factory at Washington, D. C., including the erection of a steel-casting plant and equipment for the chemical and physical laboratory; machine tools for the ordnance department of the navy-yard, Pensacola; cranes, machine tools, and motive power for the ordnance workshops at the navy-yard, Puget Sound	$2,423,000.00
Reserve guns for auxiliary cruisers	250,000.00
Reserve guns for ships of the Navy	500,000.00
General expenses of the torpedo station	65,000.00
Naval Militia	60,000.00
General repairs to buildings, magazines, machinery, etc	30,000.00
Contingent, freight, etc	75,000.00
Civil establishment at navy-yards	41,706.75
Public works, Bureau of Ordnance:	
New naval magazine near Portsmouth, N. H., including purchase of site	400,000.00
New naval magazine near Boston, including purchase of site	500,000.00
Shell house, naval magazine, Chelsea, Mass	8,000.00
Renewing sea wall and other improvements at torpedo station	32,000.00
Quarters for gunner and watchmen on Rose Island, Narragansett Bay	5,200.00
General improvements at Fort Lafayette, New York Harbor	35,000.00
Grading and filling in, extension of railroad tracks, and other improvements at naval magazine, Iona Island	49,500.00
Purchase of additional land and new buildings and improvements at the naval powder depot, Lake Denmark, N. J	93,800.00
Storehouse for ammunition at naval magazine, Fort Mifflin, Pa.	5,000.00
Powder magazine, officers' quarters, grading, draining, etc., at naval proving ground	27,000.00
For purchase of additional land and general improvements at the naval magazines, St. Juliens Creek, near Norfolk, Va	117,500.00
Water system, coal shed, and appliances at Fort Norfolk, Va	2,000.00
Dredging and repairs to wharf at St. Helena, near Norfolk, Va	2,300.00
General improvements and repairs at magazine, Mare Island, Cal.	80,000.00
New naval magazine near navy-yard, Puget Sound, Bremerton, Wash	100,000.00
Increase of the Navy, armor and armament	6,000,000.00
Total	10,902,006.75

The operations of the Bureau during the past year have chiefly been those of preparing the armament and ordnance outfits for new vessels; maintaining vessels in commission; overhauling and refitting for service the batteries, etc., of vessels in ordinary, and improving the condition and facilities of the ordnance department at the several navy-yards and stations to meet the increased requirements of the Navy, so far as funds at the disposal of the Bureau would permit.

No important developments in armor or naval ordnance have taken place during the past year. Improvements have been made, however, in the details of gun mechanisms, in sights, and in mountings and equipments.

No material change has been made in the systen of gun construction followed by the Bureau for a number of years, except that provision has been made for future guns of and above 6 inches in caliber for an inner and outer tube or barrel, instead of a solid forging as heretofore used, in order to increase the factor of safety of the chase and muzzle of the gun.

The latest types of guns are so great in weight and dimensions that it seems inadvisable to make any further increase in either respect, and increased efficiency must be looked for in the use of heavier projectiles and in the production of powder possessing higher ballistic properties. The Bureau has already taken the initial steps to introduce the former and hopes to be able to develop the latter.

In arranging the armor plans for ships a considerable reduction in the number of butts has been made on the suggestion of the Bureau, and the use of small plates about portholes and sponsons has been materially reduced.

The use of torpedoes on large vessels has practically been discontinued, no provision having been made for them in the latest battle ships and cruisers.

The general performance of guns, mounts, ammunition, and ordnance equipments is reported from ships in commission as being satisfactory, except as hereinafter noted; and it is believed that the ordnance equipment of United States naval vessels is fully up to the highest standard maintained abroad for vessels of corresponding class and age. So far as guns are concerned, the Bureau knows of none afloat or soon likely to be put afloat equal in energy to those being manufactured for United States vessels now building.

Designs have been made of gun mounts and other ordnance fittings to suit the various types of vessels now building, including the equipments and outfits under the Bureau's cognizance, and their manufacture is well in hand, there being every reason to believe that the ordnance and ordnance outfits will be in readiness for the vessels when they are ready to receive them.

Work at the Naval Gun Factory has been carried on continuously, the principal machines being kept running two and often three shifts of eight hours in twenty-four.

The number of guns completed since the date of last report is 143, namely: Eight 12-inch of 40 calibers, one 7-inch of 45 calibers, twenty-five 6-inch of 50 calibers, one 5-inch of 50 calibers, thirty-one 4-inch of 50 calibers, one 3-inch field gun, forty 6-pounder semi-automatic, and thirty-six 1-pounder automatic. Two hundred and fifty-six guns are partly completed, many of them being nearly so, namely: One 13-inch, twelve 12-inch, twenty-five 6-inch, sixty-four 5-inch, twenty-nine 4-inch, one hundred 3-inch (14-pounder), and twenty-five 6-pounder.

Eight 6-inch 30-caliber guns are in process of conversion, and one 13-inch gun is being prepared to receive a lining tube. One 4-inch 50 caliber gun in which the rifling was worn out at the proving ground has had a lining tube inserted.

In addition to the above, forgings are on hand on which no work has yet been performed for a large number of guns of all the calibers which are required to equip vessels authorized and building.

13-INCH GUNS, 35 CALIBERS.

One spare 13-inch gun is in process of manufacture for the use of the proving ground, being about 30 per cent completed. During the past year, in retesting some brown prismatic powder at the proving ground, about 10 feet of the muzzle of a 13-inch gun was blown off. The pressure gauges recorded a pressure of but 11.3 tons, and the chronograph a muzzle velocity of but 1,920 foot-seconds to the projectile. The gun was carefully examined, as was also its record of manufacture and the test sheets of the material of which it was constructed, and new test specimens were cut at or near the points of fracture for further test. The examination of the gun revealed no further defects, the records were satisfactory, and the new test bars showed normal results. The gun was cut off so as to reduce its total length 13 feet and a new chase was screwed on and reenforced by a strong hoop, the rifling was extended to the new piece and the gun returned to the proving ground. After a few rounds at 15 tons pressure, defects appeared in the bore of the old part a short distance inside where it was cut off. Further firing was discontinued and the gun was returned to the gun factory for examination, where it was discovered that the old part of the tube at the muzzle end had a crack about 2 feet long. The supposition is that the original tube was not properly treated in manufacture, that it retained initial strains which had not been relieved by annealing. The extension piece, joint, etc., seemed to be perfect. The jacket and hoops will be utilized for a new gun, the manufacturers of the forgings having offered to supply new forgings if it was shown that the original ones were defective.

12-INCH GUNS, 40 CALIBERS.

At the date of last report it was stated that one 12-inch, 40-caliber gun was completed and ready for the proving ground as soon as its mounting was ready. Since that date several guns of this type have been proved with satisfactory results, a muzzle velocity of 2,800 foot-seconds being attained with a chamber pressure of 16 tons, the gun being designed for 17 tons pressure. Weight of projectile, 850 pounds; weight of charge of smokeless powder, 350 pounds. The breech mechanism is easily operated by one man, 8 turns of the crank only being required to open or close the breech as against 15 turns in the case of former guns of large caliber.

8-INCH GUNS, 45 CALIBERS.

A number of sets of forgings have been delivered for 8-inch guns of 45 calibers for new battle ships and armored cruisers, and work has just commenced on them. These guns are designed to give a muzzle velocity of 2,800 foot-seconds to a 250-pound projectile within the limit of 17 tons pressure.

7-INCH GUN, 45 CALIBERS.

An experimental 7-inch gun of 45 calibers has been completed and proved. Its performance is considered highly satisfactory, a muzzle velocity of 3,000 foot-seconds having been attained with a projectile weighing 165 pounds with a chamber pressure of 17 tons. Weight of charge of smokeless powder, 74 pounds. This gun has a quick-working breech mechanism similar in all respects to the 6-inch rapid-firing gun, and is mounted on a pedestal mount, and can readily be pointed by one man. It has not yet been fired for rapidity, but soon will be. Probably still better results will be obtained when the exact size of powder has been developed.

6-INCH GUNS, 50 CALIBERS.

Of the forty-eight 6-inch 50-caliber guns required for the *Maine*, *Ohio*, and *Missouri*, 25 are completed and the other 23 are from 30 to 90 per cent completed.

With a charge of about 42 pounds of smokeless powder these guns give a muzzle velocity to a 100-pound projectile of 2,935 foot-seconds with a chamber pressure of a little over 16 tons. All the guns of this class are being fitted with nickel-steel breech plugs. The breech mechanism works well, some improvements having been made to the firing lock, which is designed to use a combination electric and percussion primer.

In addition to the 6-inch guns above referred to, 186 are to be made for other vessels authorized. Several sets of forgings have been delivered and work is in process.

6-INCH GUNS, 40 CALIBERS.

Funds having been appropriated for a new battery of twelve 6-inch guns for the *Baltimore*, in place of her former battery of four 8-inch of 35 calibers and six 6-inch of 30 calibers, the Bureau decided to supply her with 6-inch 40-caliber guns on pedestal mounts for her main battery. These guns and mounts are being manufactured by the Bethlehem Steel Company, as is also a spare gun of this type. All these guns have a new type of breech mechanism designed by the company; the plug, which is slightly coned, carrying a series of involute collars and having three blanks.

Four 6-inch 40-caliber guns of regular Navy type have also been ordered for spare.

Eight 6-inch 30-caliber guns are in process of conversion, being nearly completed.

5-INCH GUNS, 50 CALIBERS.

Forgings have been delivered for 64 guns of this type, 30 sets of which have been assembled, the others being in various stages of completion. The type gun and mount has been tested with highly satisfactory results, the ballistic properties of the gun being excellent. With a 60-pound projectile a muzzle velocity of 3,100 foot-seconds with 17 tons pressure was obtained with 27 pounds of smokeless powder. With a 50-pound projectile a muzzle velocity of 3,380 foot-seconds was obtained with 16.43 tons pressure. The mount functioned

satisfactorily in all respects. This gun is fitted with the same type of breech mechanism as the 6-inch 50-caliber gun, and like it does not require a brass cartridge case for the powder charge. Sixty of these guns are required for the six cruisers of the *Denver* class.

4-INCH GUNS, 50 CALIBERS.

Fair progress has been made on guns of this caliber, 31 having been completed since the date of last report and 29 others are about 75 per cent completed. These guns are for the secondary batteries of the monitors and for auxiliary cruisers.

4-INCH GUNS, 40 CALIBERS.

Fourteen sets of forgings were ordered the first part of the current year, and 15 sets additional are about to be ordered. These guns are light and well adapted for training ships and auxiliary cruisers and some are needed to replace guns of similar caliber worn out in service.

3-INCH GUNS, 50 CALIBERS.

Since the date of last report 50 guns of this caliber have been completed up to 98 per cent, and 50 others vary from 30 to 75 per cent. Fifty guns of similar kind have been purchased and delivered from private manufacturers and 50 more have been ordered.

3-INCH FIELD GUNS.

A new field gun almost identical with those now in service has been manufactured, with its mount and limber. The gun has a recoil of about 14 inches in its sleeve and has a lateral movement of a few degrees on its mount. The test of this gun and mount has been quite satisfactory and orders have just been given to the gun factory to manufacture 60 more.

6-POUNDER SEMI-AUTOMATIC GUNS.

Forty guns and mounts of this type have been manufactured at the gun factory and 25 others are nearly completed. Orders have been put in the shops for 50 more and 150 have been purchased, 100 of which have been delivered.

The semi-automatic guns do not meet with universal favor in the service, many officers preferring the ordinary rapid-fire type as being more reliable and less likely to get out of order; even a slight amount of unburned powder in the chamber is sufficient to cause considerable trouble and delay. The automatic feature need not be used, however, unless desired.

3-POUNDER SEMI-AUTOMATIC GUNS.

Fifty guns of this type, purchased from private manufacturers, have been delivered and 50 more have been ordered.

1-POUNDER HEAVY AUTOMATIC GUNS.

Thirty-six guns of this class with their mounts have been completed.

1-POUNDER HEAVY R. F. GUNS.

One hundred guns of this type, intended principally for use in subcaliber practice, have been ordered from private manufacturers.

GUN MOUNTS.

Much delay has been experienced in completing gun mounts owing to delays on the part of contractors in furnishing steel castings. Notwithstanding this, considerable progress has been made and the following have been completed:

One 13-inch hydraulic mount, eight 12-inch spring-return mounts for the four monitors now under construction, and 12 others for the three battle ships of the *Maine* class are 50 per cent completed; one 8-inch mount has been completed and one other is 75 per cent completed; one 7-inch experimental mount has been completed; twenty-five 6-inch pedestal mounts for 30-caliber guns have been completed and 8 partially so, and 28 others have been converted from Mark VI to Mark VII, thereby increasing their efficiency to a considerable extent. Forgings and castings for fifty 6-inch pedestal mounts and shields of the latest type were long since ordered for the 6-inch guns of the *Maine* class, and much of the material has been delivered and considerable progress has been made in manufacture. There have been a great many rejections of material, which helped to complicate matters and cause delay, but the difficulty now appears to be over, and in all probability the mounts will be ready before they are required. The pedestals are well advanced and can be supplied to the shipbuilders whenever they need them. Twenty-three shields for 6-inch Mark VII mounts have been completed. Six 5-inch mounts have been completed, 1 is nearly completed, and 25 others are partly completed. Thirty-two 5-inch pedestal mounts have been converted from Mark VI and Mark VII to Mark VIII, 14 others are nearly converted, and 10 more partly converted.

Twenty 4-inch pedestal mounts have been completed. Ten 4-inch top carriages and slides have been completed, and 7 others are nearly so. Twenty-two 4-inch mounts have been converted to later marks, and 23 others are partly converted.

Twenty-two 3-inch pedestal mounts have been completed, and work is in progress on the details of a large number of mounts of this class; but here again very great delay has occurred, due to defective castings, which had to be replaced. A landing carriage or field mount and limber for a 3-inch 50-caliber gun has been made and tested with satisfactory results, and it is contemplated to give each large vessel carrying 14-pounder guns two such outfits.

NEW TYPES OF GUN MOUNTS.

Plans have been prepared for a new type of mount for the 12-inch 40-caliber guns, in which there are but two recoil cylinders, located under the gun, the counter-recoil springs being placed below the recoil cylinders and actuated by levers, which are attached to the yoke on the breech of the gun by connecting rods. By this means the recoil and counter-recoil systems are placed entirely under the gun, and will be less liable to injury than was the case in some former mounts for this caliber of gun; the parts will be more accessible, and the springs, being

under instead of in the recoil cylinders, as heretofore, can be more readily replaced, if necessary, and are always open to inspection. A type mount is now being made. The arrangement proposed allows of a reduction in the diameter of the barbette armor and of a reduction in the size of the port opening, both very important features.

The latest type of 6-inch mount seems to fill the requirements satisfactorily. It is simple and strong; all parts are accessible; it has elevating gear on both sides and friction brakes in both the elevating and training gear; it works easily, one man being able to train and elevate the gun with facility.

ARMAMENTS FOR VESSELS UNDER CONSTRUCTION OR REPAIRS.

During the past year batteries were installed on board battle ships *Alabama*, *Illinois*, and *Wisconsin*. These ships, with the exception of the *Illinois*, have had their gun trials, which were satisfactory, and the *Illinois* will soon be ready for hers.

The armament for all other ships building has been provided for and is in various stages of advancement, with every probability of its being ready when required.

The battery of the *Olympia*, now nearly ready for service, has been overhauled and put in order. New and improved ammunition hoists have been installed for her 8-inch turrets, and electric turret-turning gear has been installed by the Bureau of Construction and Repair in place of the former steam turning gear, which will add materially to the vessel's efficiency.

Twelve converted 6-inch 30-caliber guns have been completed for the *San Francisco*, and her secondary battery has been improved.

A battery of two 8-inch rifles on central pivot carriages and of six 6-inch R. F. guns on pedestal mounts has been shipped to San Francisco for the *Boston*.

The 5-inch mounts on board the *Brooklyn*, on the Asiatic Station, having given some trouble by getting out of adjustment, the Bureau decided to supply a set of new ones. Accordingly, a few months ago twelve 5-inch pedestal mounts and twelve 5-inch guns with complete outfit were shipped to Manila and are now mounted on board. The old outfit is to be sent home for conversion. After the battle of Santiago the *Brooklyn* had a number of her 5-inch mounts considerably injured and a new set was sent her, which was installed on board at Guantanamo. This, therefore, is the third set of 5-inch mounts this vessel has had. The Bureau is satisfied that there will be no more difficulty. The earlier mounts had considerable bronze in their construction, which gradually yielded and got out of adjustment. The new mounts are all of steel.

There are a number of 4 and 5 inch mounts in service on different vessels which the Bureau considers unsatisfactory, and it is gradually having others made to replace them as opportunity offers.

By the loss of the *Yosemite* in a typhoon off the island of Guam, the Bureau lost her battery of ten 5-inch R. F. guns and six 6-pounder guns.

RANGE FINDERS.

A new type of vertical-base range finder for use in the tops of vessels has been submitted by the inventor and is on trial and gives promise of being a useful instrument.

FUZES AND PRIMERS, FIRING LOCKS, ETC.

Several new types of percussion fuzes have been experimented with, some of them giving very satisfactory results.

Improvements have been made in combination electric and percussion primers for breech-loading guns, and a satisfactory type has been decided upon.

A considerable number of combination firing locks for use with the duplex primers have been made and are being issued with new primers to the ships of the Navy, as opportunity offers.

TELESCOPE SIGHTS.

While all guns of and above those of 4 inches in caliber are supplied with telescope sights in addition to open-bar sights, there is a great diversity of opinion as to the utility of the former for use in battle. The clouding of the lenses due to moisture, smoke, or powder gases, and the difficulty of holding the target in the field of view or of recovering it when lost therefrom, are sources of great inconvenience. Moreover the telescope is more liable to get out of adjustment than the bar sight. For target practice in smooth water, under favorable conditions as to wind, etc., the telescope sight is an ideal one, but it is doubtful if it is as serviceable for quick firing in action as the open-bar sight. As both kinds of sights are furnished, it rests with commanding officers to determine which will most satisfactorily fulfill the requirements of service.

SUBCALIBER ATTACHMENTS.

A large number of subcaliber attachments have been made using the 1-pounder barrel, and the Bureau has increased the allowance per ship and given great latitude in the expenditure of ammunition for subcaliber practice.

SMALL ARMS.

New and improved sights are being supplied to all the .30-caliber rifles in service.

TORPEDO ARMAMENT OF VESSELS.

The torpedo armaments of all vessels designed to carry torpedoes have been provided for.

The torpedo armaments of the *Olympia* and the *San Francisco* have been removed.

TORPEDOES.

Twenty-nine Whitehead torpedoes, Mark II, 5-meter 45-centimeter, have been manufactured, and have successfully passed the required tests.

One torpedo of this lot has been fitted with a device for superheating the compressed air, which upon experiment has been found to be of value.

GYROSCOPIC STEERING GEARS FOR TORPEDOES.

Two new gyroscopic steering gears for use in torpedoes have been tested. One has given good results. A feature of this new device is that it can be so adjusted that after the torpedo has been launched the torpedo will turn in the water through a predetermined horizontal angle, and then take up a straight course. Further experiments are in progress. A Kaselowsky steering gear adapted to a Whitehead torpedo is in process of construction, and will soon be ready for trial.

TORPEDO TUBES.

One experimental central pivot, 5-meter, above water launching tube, built at the naval gun factory, has been installed on the torpedo boat *Morris* and has given excellent results. This tube was designed to secure simplicity and lightness, and in these respects has been successful. It is about half the weight of the tubes of the same class previously made.

Six submerged tubes, of the Elswick-Whitworth type, for the *Maine*, *Missouri*, and *Ohio*, are in process of construction at the naval gun factory.

AIR COMPRESSORS.

The air compressors which have been built or contracted for during the past year are a marked improvement on previous types.

Twelve air compressors have been manufactured and have successfully passed the required tests. Sixteen are in process of construction.

Among these air compressors is a new type, which is driven by an electric motor instead of a steam engine, as in previous types. One of these electrically driven compressors has been completed and tested. Its dimensions are 75 by 56 by 34 inches over all. Its weight is 5,000 pounds, the motor weighing over 3,000 pounds, the machine and base weighing something less than 2,000 pounds. The motor is shunt wound, makes 300 revolutions per minute, and develops 25 horsepower with an 80-volt current.

Metallic piston packing is used in the air compression cylinders. When tested this machine showed a capacity of 21.7 cubic feet of air per hour at a pressure of 1,700 pounds per square inch. On an endurance test this machine ran for four hours against a pressure of 1,700 pounds per square inch. Compared with a steam machine of the same capacity, this one is very heavy; but this is a fault inherent with an electrically driven machine. All parts of the machine are easily accessible for repairs, the construction and workings are simple and easily understood, and with proper attention to oiling and cleanliness the machine would run almost indefinitely under the amount of work it would ordinarily have to do on board ship.

TORPEDO ELECTRIC FIRING APPARATUS.

There was installed on the torpedo boat *Morris*, at the torpedo station, an experimental torpedo electric firing apparatus. After tests with this, it is now being installed on all torpedo boats and torpedo-boat destroyers.

This apparatus has a keyboard which can be manipulated by the commanding officer while he is conning the vessel. From this keyboard he can ascertain when the torpedo tubes are loaded and primed. By means of it he can at will fire any torpedo or all torpedoes at once from his position at the conn.

The device, used in connection with the adjustable gyroscopic steering gear previously referred to, will enable the torpedo vessel to fire all its tubes simultaneously at one target, for after entering the water the torpedoes will all pursue a predetermined course in the direction of the target, as arranged for by the adjustment of the gyroscopic steering gear and the train of the torpedo launching tube.

EROSION OF GUNS.

No appreciable injury has been done to guns afloat by erosion of the bore, with the exception of one 13-inch gun on board the *Indiana*, which is slightly eroded, but not to an extent to impair its efficiency.

At the naval proving ground the bore of a 4-inch .50-caliber gun became eroded to such an extent that it was bored out and a liner inserted. This gun was fired a great many rounds with high pressures, being used for a long period for testing powder, projectiles, and metallic-cartridge cases. On the other hand, a 5-inch .40-caliber gun at the proving ground has been fired one thousand times with black, brown, and smokeless powder, principally with the latter, and its bore is apparently in perfect condition.

That erosion takes place with much greater rapidity when guns are overheated is apparent from the following fact: A 3-inch 50-caliber gun (14-pounder) at the proving ground had been fired at intervals, 550 rounds with smokeless powder. The bore was uninjured, the firing having been done a few rounds at a time only. The gun was then fired 108 rounds in an hour and a quarter with pressures of about 15.5 tons, the barrel from the trunnions to the muzzle becoming very hot, sufficiently so to char a piece of soft wood left on the chase for a few minutes. After firing about 50 rounds the gun would not return to battery, and the filling plugs of the recoil cylinders being removed, a considerable quantity of hot glycerin spurted out, when the gun at once returned to battery, showing that the recoil cylinders had been filled too full to allow for the expansion of the fluid. After the firing above referred to it was observed that the lands at the origin of the rifling had been so far destroyed as to permit the insertion of the band of the projectile into the rifling without difficulty, and at the muzzle the diameter of the bore had increased several hundredths of an inch.

The rate of firing to which this gun was subjected, being less than one and a half per minute, which is much below the rapidity that might be expected in an engagement, brings into question the exemption from erosion when thin-walled guns are overheated by frequent firing.

That the temperature of the barrel is a serious factor in erosion is exemplified in the case of the thick-barreled small caliber automatic guns as compared with a thin barrel encased in a water jacket. The latter barrel, using the same ammunition, will last at least three times as many rounds as the former will.

ARMOR.

Since the date of the last report all the armor manufactured under contracts made prior to that report has been delivered. This makes the total quantity of armor delivered for all vessels authorized prior to the *Maine*, *Missouri*, and *Ohio*, 34,971 tons, since the establishment of the armor plants in this country. The capacity of both plants is now about 7,500 tons per year of armor of the best quality, and at the instance of the Department the manufacturers are making preparations to increase their output to from 10,000 to 12,000 tons per year, in order to complete deliveries under the present contracts within the times that the armor will be required for vessels now under construction, and also in order to be ready to provide armor for additional vessels that might from time to time be authorized by Congress.

Under authority vested in the Department by Congress, contracts were signed November 28, 1900, for over 37,000 tons of armor required for vessels authorized and building, as shown in the following table, which gives the quantity required for each vessel:

	Tons.
Maine	2,451
Missouri	2,451
Ohio	2,451
Pennsylvania	3,332
New Jersey	3,332
Georgia	3,332
Virginia	3,332
Rhode Island	3,332
West Virginia	1,908
Nebraska	1,908
California	1,908
Maryland	1,908
Colorado	1,908
South Dakota	1,908
St. Louis	743
Milwaukee	743
Charleston	743
Total	37,690

The terms of these contracts are extremely advantageous to the Government both as to quality and to price. With respect to the former, comparing the tests made in this country with reports of those made abroad, our armor would seem to be the very best that can at present be produced; and the price at which it is obtained is considerably lower than paid abroad. Deliveries amounting to nearly 2,000 tons have already been made under these contracts.

During the year several tests have been made of experimental armor plates presented by inventors designed to improve the quality of armor, but in no instance has there been promise of improvement.

SMOKELESS POWDER.

All new ships fitted out during the past year and such old ones as have received a general overhauling have been supplied with an outfit of smokeless powder, and a considerable quantity has been accumulated for reserve and for ships approaching completion, and to supply the older vessels of the Navy, as opportunity comes to replace their brown with smokeless powder.

Complete outfits of United States Navy smokeless powder have been prepared for the *New Orleans* and *Albany*, to take the place of the cordite purchased with the ships. The Bureau was led to take this action partly in deference to the views of a considerable number of officers of the Navy, and partly because it was deemed preferable to adhere to the standard nitro-cellulose powder adopted for the United States Navy.

So far as the Bureau was concerned, there was no doubt in its mind as to the safety of the cordite powders, though the Bureau inclines to the belief that such powders deteriorate with age, are very susceptible to changes of temperature, which affects their efficiency, and are very destructive to the bores of guns.

When the Bureau first decided to establish a plant for the manufacture of smokeless powder and made the fact known to the private manufacturers, the information was not particularly agreeable to them. Notwithstanding, in response to a request from the Bureau for such information as might be of use to it in carrying out its plan, the private manufacturers threw open their works and gave the Bureau the results of their experience and the details of the various processes, appliances, etc., used by them; an act of courtesy which the Bureau is glad to publicly acknowledge. From that time on there has been a complete interchange of confidence, and all parties have worked together to perfect the production of a nitro-cellulose powder that would be entirely satisfactory in every respect. This, as might be expected, has been attended with gratifying results; and while the manufacture of powder by the Bureau is just so much out of the pockets of the private manufacturers, it is of small account when compared with the present and future needs of the Navy. It is decidedly in the interest of the Navy Department that several private manufacturers should be in a position to supply smokeless powder, and without doubt liberal patronage will always be given to those who excel in the art.

After the destruction by fire of a considerable quantity of smokeless powder in one of the magazines at Mare Island, California, which is treated of elsewhere in this report, the Bureau being much concerned on account thereof, and as a measure of expediency, requested the Department to order a board to consider the manufacture of smokeless powder in all its details, with a view to revising the specifications, if considered necessary; to prescribe the tests to be applied during the process of manufacture and to the finished powder; and also to draw up rules for the storage, preservation and test of powder stored in magazines, on shore and on shipboard.

This board was composed of naval officers best qualified for the duty, of the chemists of the powder factory and torpedo station, and an eminent chemist from civil life was associated with them. The various manufacturers of smokeless powder were invited to send their chemists and superintendents to confer with the board, which they did; and, through the courtesy of the Army Ordnance and the War Department, the inspector of powder for the United States Army and the chemist of the Frankford Arsenal also conferred with the board.

As a result of this conference and of the deliberations of the board, the specifications for the manufacture of smokeless powder were carefully revised, and rules were established, which have since been issued to the service, for the inspection, storage, care, and preservation of

smokeless powder in magazines on shore and on shipboard; and if these rules are properly carried out, which undoubtedly they will be, the Bureau has every confidence that no trouble or danger will be experienced with respect to the storage and preservation of nitrocellulose powder. In addition to the foregoing, instructions were sent out to all naval magazines and to all ships carrying smokeless powder to examine critically all lots of powder on hand, making stability tests thereof, with instructions as to the method of making the tests. As a result of this, a thorough examination and test was made of all smokeless powder in the Navy, on shore and afloat. The result of this examination was most satisfactory. For lack of experience in making tests, and no doubt from a degree of nervousness caused by the order, a small amount of powder was destroyed on one or two vessels which without doubt was perfectly stable, but such action was not unnatural and easily excusable. Testing outfits have been prepared as rapidly as possible for all magazines and for ships, and the use of them will soon be generally understood throughout the service.

The Bureau has also directed the erection at Indian Head of a constant-temperature magazine for the storage of samples of all lots of smokeless powder manufactured for the Navy. It is proposed to keep this magazine at a constant temperature of 105° F., which will represent the worst conditions likely to obtain in magazines afloat or on shore, and the samples will be so arranged that frequent observations of them may be made. At stated intervals stability tests will be made, and thus all powders on board ship and in magazines on shore will have a representative sample under close surveillance at the proving ground under conditions simulating the worst they are liable to be subjected to. In the course of its conference with the powder manufacturers the board above referred to discovered the fact that their processes differed very considerably, and therefore it selected the one that was considered the best and incorporated it in the specifications, with a view to securing perfect uniformity of manufacture.

There is no doubt but that the smokeless powder made to-day is considerably superior to that made a year ago, though by this statement it must not be inferred that the previous manufacture is unsatisfactory—it is merely the natural process of development which has taken place which has led to the production of a superior product. The Bureau considers the powder question in a very satisfactory state at the present time. The following extract from the report of the officer in charge of the powder factory is concurred in by the Bureau:

> The year's experience with the navy smokeless powder places it in a high position as a propellent. There seems to be little difficulty in designing the grain to get exactly the results required within the limits of the design of the gun. In the newly completed gun of 50 calibers length a weight of powder equal to about 45 per cent of the weight of the projectile gives a velocity of 3,000 foot-seconds. To attain this result, however, the residual solvent must not exceed from 1 to 1.5 per cent. If the solvent remaining in the powder exceeds that amount to a considerable extent it results in a great waste of powder. The pressures are lower and so are the velocities. To bring the latter up to the requirements a considerable addition must be made to the charge. As the amount of solvent becomes reduced in drying, the remaining portions are expelled with increasing difficulty. These facts point to the necessity of fixing a very low limit to the amount of volatiles permissible in this powder.
>
> As regards uniformity of velocities, smokeless powders do not compare favorably with brown powder, and our own forms no exception to the rule. Although a perfectly waterproof material, it is affected adversely by damp weather. It will, how-

ever, regain its former ballistic properties when the weather becomes dry. This variation, on account of the high velocities attained, is not sufficient to injuriously affect the shooting at reasonable ranges. It rarely exceeds 2 per cent and is generally not in excess of 1 per cent.

It is to be regretted that with a powder perfectly smokeless in itself it is necessary to employ in the larger calibers such a considerable amount of black ignition powder. All attempts to obviate this have failed. A reduction of the amount of black powder employed is quickly felt in lower velocities and annoying hang fires. On the other hand, it can not be said that the amount of smoke produced will ever obscure the target for more than a very few seconds.

Numerous experiments have been made with a view to substituting fine-grain smokeless for black powder for ignition charges, but such attempts were always attended with a dangerous rise of pressure.

NEW BATTERIES FOR CERTAIN VESSELS.

The Bureau has included in its annual estimates items for new main batteries for the *Newark*, *New Orleans*, and *Albany*.

The *Newark* is to have a general overhauling, and being an excellent and serviceable vessel, the Bureau desires to give her a new main battery of twelve 6-inch 40-caliber rifles mounted on pedestal mounts. At present she carries twelve 6-inch 30-caliber guns mounted on old-fashioned gravity-return central-pivot mounts, which are not up to date. The proposed battery will greatly increase the efficiency of the vessel, and her present 6-inch guns can be kept for reserve.

The *New Orleans* and *Albany* each carry six 6-inch and four 4.7-inch guns of foreign manufacture and of a type not used in the United States Navy. They require special ammunition differing from that used in standard United States navy guns, and in consequence it is very difficult to keep these vessels supplied with ammunition or to supply spare parts for the battery. The present batteries are excellent, but it is considered inadvisable to have guns on any ships differing from our own standards. The Bureau proposes to give each vessel a uniform battery of ten 5-inch 50-caliber guns, provided the necessary funds are made available.

CONVERSION OF 6-INCH GUNS.

There are still in service thirty-one 6-inch .30-caliber breech-loading rifles which have the earlier and slow-working type of breech mechanism. These are excellent guns and should be converted into rapid-firing guns, and the Bureau has asked for a moderate sum of money to continue the work of conversion.

RESERVE GUNS FOR SHIPS OF THE NAVY.

The Bureau has inserted in its annual estimates an item for the purchase of a certain number of reserve guns for the Navy. This is absolutely necessary, as from time to time accidents will occur and guns will wear out and require tubing, and ships will have to lay up while such work is being performed unless there are spare guns on hand, and a certain number of guns are always required for use at the proving ground for tests of armor, powder, and projectiles.

Batteries have been mounted since the date of last report on the following vessels:

Ajax.	Dupont.	Machias.	Siren.
Alert.	Foote.	Mohican.	Somers.
Alliance.	Frolic.	Nero.	Stockton.
Annapolis.	Hannibal.	New York.	Wasp.
Cæsar.	Hist.	Peoria.	Wheeling.
Columbia.	Illinois.	Piscataqua.	Winslow.
Cushing.	Macdonough.	Prairie.	

Batteries have been landed since the date of last report from the following vessels:

Adams.	Dorothea.	Minnesota.	Scorpion.
Ajax.	Dupont.	New York.	Somers.
Bennington.	Ericsson.	Panther.	Sterling.
Cæsar.	Foote.	Petrel.	Texas.
Cushing.	Hist.	Prairie.	Winslow.
Dahlgren.	Mayflower.	Rodgers.	

Work has been performed on vessels since the date of last report at navy-yards and naval stations as follows:

PORTSMOUTH NAVY-YARD.

Bagley.	Craven.	Piscataqua.	Vixen.
Barney.	Dahlgren.	Raleigh.	
Biddle.	Detroit.	Reina Mercedes.	

BOSTON NAVY-YARD.

Amphitrite.	Lancaster.	Newark.	Scorpion.
Bancroft.	Lawrence.	Olympia.	Sterling.
Constellation.	Macdonough.	Peoria.	Vesuvius.
Dolphin.	Machias.	Piscataqua.	Vicksburg.
Fortune.	Minnesota.	Prairie.	

TORPEDO STATION, NEWPORT, R. I.

Adder.	Craven.	Maine.	Rodgers.
Alabama.	Dahlgren.	Massachusetts.	Shubrick.
Albany.	Dale.	Missouri.	Somers.
Atlanta.	Decatur.	Moccasin.	Stockton.
Bagley.	De Long.	New York.	Stringham.
Bailey.	Dolphin.	Nicholson.	Thornton.
Bainbridge.	Grampus.	O'Brien.	Tingey.
Barney.	Hartford.	Ohio.	Truxtun.
Barry.	Holland.	Olympia.	Whipple.
Biddle.	Illinois.	Paul Jones.	Wilkes.
Blakely.	Indiana.	Perry.	Wisconsin.
Brooklyn.	Kearsarge.	Pike.	Worden.
Chauncey.	Lawrence.	Prairie.	
Chicago.	Macdonough.	Preble.	

NEW YORK NAVY-YARD.

Alabama.	Dixie.	Mayflower.	Rodgers.
Albany.	Dupont.	McKee.	Somers.
Alliance.	Florida.	Michigan.	Stewart.
Amphitrite.	Hartford.	Monongahela.	Supply.
Atlanta.	Illinois.	Montgomery.	Talbot.
Bailey.	Indiana.	New York.	Vermont.
Baltimore.	Kearsarge.	Olympia.	Wilkes.
Brutus.	Kentucky.	Osceola.	Wisconsin.
Buffalo.	Machias.	Panther.	Wompatuck.
Cincinnati.	Mackenzie.	Prairie.	
Constellation.	Massachusetts.	Rainbow.	

LEAGUE ISLAND NAVY-YARD.

Alabama.
Columbia.
Catskill.
Canonicus.
Dorothea.
Indiana.
Jason.
Katahdin.
Lehigh.
Mahopac.
Manhattan.
Miantonomoh.
Minneapolis.
Montauk.
Nahant.
Panther.
Richmond.
Somers.
Stringham.
Yankee.

WASHINGTON NAVY-YARD.

Adams.
Alabama.
Albany.
Alert.
Alexander.
Alliance.
Amphitrite.
Annapolis.
Arkansas.
Atlanta.
Bagley.
Bailey.
Bainbridge.
Bancroft.
Barney.
Biddle.
Blakely.
Boston.
Brooklyn.
Buffalo.
Cæsar.
Chauncey.
Chesapeake.
Chicago.
Cincinnati.
Concord.
Constellation.
Cushing.
Dale.
De Long.
Des Moines.
Detroit.
Dixie.
Dolphin.
Dorothea.
Dupont.
Ericsson.
Essex.
Fern.
Florida.
Foote.
Franklin.
Goldsborough.
Hannibal.
Hawk.
Hist.
Illinois.
Indiana.
Iowa.
Kearsarge.
Kentucky.
Lawrence.
Macdonough.
Machias.
Mackenzie.
Maine.
Marblehead.
Marietta.
Massachusetts.
Mayflower.
McKee.
Miantonomoh.
Missouri.
Monadnock.
Monterey.
Mohican.
New York.
Nicholson.
O'Brien.
Ohio.
Olympia.
Oregon.
Panther.
Paul Jones.
Peoria.
Perry.
Philadelphia.
Prairie.
Preble.
Puritan.
Raleigh.
Rodgers.
San Francisco.
Scorpion.
Shubrick.
Solace.
Stockton.
Stringham.
Terror.
Texas.
Thornton.
Tingey.
Topeka.
Truxtun.
Wheeling.
Whipple.
Winslow.
Wisconsin.
Worden.
Wyoming.
Yankee.

NORFOLK NAVY-YARD.

Alabama.
Amphitrite.
Annapolis.
Arkansas.
Cushing.
Dale.
Decatur.
Dixie.
Dolphin.
Dupont.
Essex.
Foote.
Franklin.
Frolic.
Galveston.
Illinois.
Hist.
Missouri.
Rodgers.
San Francisco.
Shubrick.
Siren.
Stockton.
Texas.
Thornton.
Tingey.
Topeka.
Truxtun.
Whipple.
Winslow.
Worden.

MARE ISLAND NAVY-YARD.

Abarenda.
Adams.
Alert.
Badger.
Boston.
Concord.
Davis.
Farragut.
Fox.
Goldsborough.
Independence.
Iowa.
Manning.
Marblehead.
Mohican.
Oregon.
Paul Jones.
Pensacola.
Perry.
Philadelphia.
Preble.
Solace.
Wheeling.
Wisconsin.

CAVITE, P. I., NAVAL STATION.

Albany.
Annapolis.
Arayat.
Basco.
Bennington.
Brooklyn.
Callao.
Castine.
Celtic.
Concord.
Don Juan de Austria.
El Cano.
General Alava.
Helena.
Isla de Cuba.
Kentucky.
Leyte.
Manila.
Mariveles.
Mindoro.
Monadnock.
Monterey.
Nanshan.
Nashville.
Newark.
New Orleans.
New York.
Pampanga.
Paragua.
Petrel.
Princeton.
Quiros.
Samar.
Urdaneta.
Vicksburg.
Villalobos.
Wilmington.
Wompatuck.
Yorktown.

The cost of the work on the vessels above named during the year ending September 30, 1901, is as follows:

Portsmouth	$3,364.93
Boston	17,176.24
New York	444,066.43
League Island	248,722.56
Washington	689,032.19
Norfolk	254,634.82
Mare Island	352,243.31
Torpedo station	24,191.26
Cavite	1,493.38
Total	2,034,925.12

This includes the manufacture and preparation of outfits, mounting and landing batteries, repairs and preservation of stores and outfits, preservation of batteries on vessels in ordinary or in reserve, etc.

* * * * * * *

PERSONNEL.

ASSISTANT CHIEF AND OTHER OFFICERS OF THE BUREAU.

Lieut. T. C. Fenton, U. S. N., who has held the position of assistant chief of the Bureau, having been detached and ordered to sea duty, the Bureau desires to record its appreciation of his valuable services during the past few years. His ability, devotion to duty, and uniform courtesy have rendered him an invaluable assistant, and the Bureau regrets that the routine of duty necessitates his detachment. He will be succeeded by Lieut. Volney O. Chase, U. S. N., who for some months past has had charge of the drafting force at the naval gun factory.

The Bureau has as a rule but four officers, including the assistant chief, to carry on its work, which is not only great in volume, but endless in details, calling for close and continuous attention to duty, and it has been fortunate thus far in securing the services of officers who have the necessary technical skill and knowledge and who willingly give their best services, which are duly appreciated by the Bureau.

At times it is very difficult to procure the services of officers specially fitted to perform some of the technical duties pertaining to the Bureau.

There seems to be a general opinion that all naval officers should fully understand and be able to perform everything directly or indirectly pertaining to their profession and to do all things equally well or they should be ashamed of themselves. In other words, while the tendency of the age is to specialize, they must generalize. When it is considered that what may be termed modern naval science embraces a great number of professions, the magnitude of the problem confronting the naval officer of to-day may well appall him.

First of all, he must be a thorough seaman, with all that it implies; he should be an accomplished navigator; a steam engineer, and something of a civil engineer and surveyor; he should have a thorough knowledge of gunnery and torpedoes; he should have a fair knowledge of law and diplomacy; he should be a good electrician; have a knowledge of chemistry and metallurgy; be well up in ordnance; be a good

linguist and a good business man, and be something of a naval architect. The question is, Can he do all these things and do them equally well? The answer is, No, not equally well, but he can acquire a sufficient knowledge of the most important of them, such, for example, as those which enter most prominently into his career as a sea-going officer, to make him practically a master of his profession in a general sense, and a useful and accomplished officer, while here and there an individual will take up some branch as a specialty, depending upon his tastes and opportunities.

Very few officers thus far, so far as the Bureau is aware, have made a specialty of ordnance in its theoretical and more intricate branches, though many have a good knowledge of the mechanical side or shop practice of manufacturing guns, mounts, etc.

Owing to the urgent demand for officers for sea duty, the Bureau is frequently embarrassed by the detachment of some officer performing important duty before a relief can be found and properly broken in. There seems to be no remedy for this state of affairs at the present time, which is unfortunate.

Mr. E. S. Brandt remains as chief clerk. The Bureau has in previous reports acknowledged his efficiency, and is glad to do so again; and it takes pleasure in acknowledging the efficient and valuable services of the official and civil force both in the Bureau and at the various navy-yards and stations and private works. All have performed their duties to the Bureau's entire satisfaction.

The following papers accompany this report:

A.—Officers performing duty.

B^1.—Table showing the assignment of guns of main and secondary batteries.

B^2.—Table showing torpedo armament of vessels.

C.—Detailed estimates for the fiscal year ending June 30, 1903.

D.—Annual report of the superintendent of the Naval Gun Factory.

E.—Annual report of the inspector of ordnance in charge of the naval proving ground, Indian Head, Md.

F.—Annual report of the inspector of ordnance in charge of the naval torpedo station, Newport, R. I.

G.—Annual report of the inspector of ordnance at the navy-yard, New York.

H.—Annual report of the inspector of ordnance at the navy-yard, Norfolk, Va.

I.—Annual report of the inspector of ordnance at the navy-yard, Mare Island, Cal.

J.—Annual report of the inspector of ordnance at the naval station, Cavite, P. I.

K.—Abstract of offers for furnishing supplies or services, and which were contracted for by the Bureau of Ordnance during the fiscal year ending June 30, 1901, and contracts awarded thereon.

L.—Regulations governing the examination of smokeless powder for magazines on shore.

M.—Regulations governing the examination of smokeless powder for magazines on shipboard.

N.—Table of elements of latest types of naval guns (models of 1899), giving perforation of face-hardened armor, service velocities at ranges up to 3,000 yards with smokeless powder, capped and uncapped armor-piercing projectiles at normal impact.

Photolithographs.

Respectfully,

CHARLES O'NEIL,
Chief of Bureau of Ordnance.

The SECRETARY OF THE NAVY.

REPORT OF THE CHIEF OF THE BUREAU OF CONSTRUCTION AND REPAIR.

DEPARTMENT OF THE NAVY,
BUREAU OF CONSTRUCTION AND REPAIR,
Washington, D. C., September 30, 1901.

SIR: In compliance with the Department's instructions, I have the honor to submit the report of the Bureau for the fiscal year ending June 30, 1901, and estimates for appropriations required for the fiscal year ending June 30, 1903.

The estimate marked "A" is for the salaries of certain clerical employees of the Bureau. The slight increase shown in this estimate over the amount appropriated last year is not intended to provide an increase of force, but to permit a transfer from the rolls, under "Increase of the Navy," to the civil establishment.

The estimate marked "B" is for the construction and repair of vessels at navy-yards and on foreign stations, the purchase of stores, materials, machinery, tools of all kinds, and the proper performance of all general work for the Navy in the line of construction and repair. The demands upon this appropriation naturally increase in proportion to the growth of the Navy and the increased number of naval stations to be maintained.

The estimates marked "B Special" are for the improvement of construction plants at the several navy-yards and naval stations, and are in amount barely sufficient to provide for the necessary modifications of existing plants to render them efficient and modern and to provide new installations already contemplated.

The estimates marked "Bl. Special" are for hoisting appliances necessary at New York and Cavite, for two coal lighters for use at Mare Island, and for four tugs for general use at navy-yards.

The estimates marked "C" are for the pay of the regular clerical force at the several navy-yards, carried on the "Civil establishment."

The estimate marked "D" is for the amounts required by this bureau under appropriation "Increase of the Navy, construction and machinery," for new vessels authorized by Congress to June 30, 1902.

ESTIMATES, APPROPRIATION CONSTRUCTION AND REPAIR, 1902–1903.

Estimates of appropriations required for the fiscal year ending June 30, 1903, by the Bureau of Construction and Repair, Navy Department.

Detailed objects of expenditures and explanations.	Estimated amount required for each detailed object.	Total amount to be appropriated under each head of appropriation.	Amount appropriated for current fiscal year, ending June 30, 1902.
A. *Salaries.*			
1 chief clerk (appropriated)	$2,000		
1 clerk of class 4 (submitted)[1]	1,800		
2 clerks of class 3 (appropriated)	3,200		
1 clerk of class 2 (appropriated)[2]	1,400		
2 clerks of class 1 (appropriated)	2,400		
2 clerks of class 1 (submitted)[3]	2,400		
1 assistant messenger (appropriated)	720		
1 laborer (appropriated)	660		
		$14,580	$10,380
B. *Construction and repair of vessels.*			
For preservation and completion of vessels on the stocks and in ordinary; purchase of materials and stores of all kinds; steam steerers, pneumatic steerers, steam capstans, steam windlasses, and all other auxiliaries; labor in navy-yards and on foreign stations; purchase of machinery and tools for use in shops; carrying on work of experimental model tank; designing naval vessels; construction and repair of yard craft, lighters, and barges; wear, tear, and repair of vessels afloat; general care, increase, and protection of the Navy in the line of construction and repair; incidental expenses, such as advertising, freight, foreign postage, telegrams, telephone service, photographing, books, professional magazines, plans, stationery, and instruments for drafting room (appropriated)	9,000,000.00	9,000,000.00	7,000,000.00
B. *Special.—Improvement of construction plants.*			
For repairs to and improvement of plant at navy-yard, Portsmouth, N. H. (appropriated)	30,000.00	30,000.00	50,000.00
For repairs to and improvement of plant at navy-yard, Boston, Mass. (appropriated)	50,000.00	50,000.00	50,000.00
For repairs to and improvement of plant at navy-yard, New York, N. Y (appropriated)	50,000.00	50,000.00	25,000.00
For repairs to and improvement of plant at navy-yard, League Island, Pa. (appropriated)	50,000.00	50,000.00	50,000.00
For repairs to and improvement of plant at navy-yard, Norfolk, Va. (appropriated)	50,000.00	50,000.00	50,000.00
For repairs to and improvement of plant at navy-yard, Mare Island, Cal. (appropriated)	50,000.00	50,000.00	50,000.00
For repairs to and improvement of plant at navy-yard, Puget Sound, Wash. (appropriated)	75,000.00	75,000.00	30,000.00
For construction plant at naval station, Algiers, La. (appropriated)	15,000.00	15,000.00	15,000.00
For construction plant at naval station, Charleston, S. C. (submitted)	50,000.00	50,000.00	
For construction plant at naval station, Philippine Islands (submitted)	50,000.00	50,000.00	
B 1. *Special.—Construction and repair of vessels.*			
For 1 steel derrick barge, to be used for construction and repair work at the navy-yard, New York, N. Y. (submitted	35,000.00	35,000.00	
For 1 steel derrick barge for use at the naval station, Cavite, P. I. (submitted)	45,000.00	45,000.00	
For 2 steel coal lighters, with all fittings complete, for use at the navy-yard, Mare Island, Cal., each (submitted) .. (Requested by Bureau of Equipment.)	35,000.00	70,000.00	
For 4 steel tugs for general service, each (submitted)	70,000.00	280,000.00	
C. Civil establishment,			
At navy-yard, Portsmouth, N. H.:			
1 clerk to naval constructor (appropriated)	$1,400.00		
2 writers, at $1,017.25 each (appropriated)	2,034.50		
At navy-yard, Boston, Mass.:			
1 clerk to naval constructor (appropriated)	1,400.00		
2 writers, at $1,017.25 each (appropriated)	2,034.50		

[1] Now detailed to Bureau and borne on rolls of the Department.
[2] Now appropriated for and on Bureau's rolls as assistant draftsman.
[3] Not an increase of the force, but a transfer at a slight increase in pay of two of the most necessary clerks of this grade from appropriation "Increase of the Navy" to the salaried rolls, where they of right belong

Estimates of appropriations required for the fiscal year ending June 30, 1903, by the Bureau of Construction and Repair, Navy Department—Continued.

Detailed objects of expenditures and explanations.	Estimated amount required for each detailed object.	Total amount to be appropriated under each head of appropriation.	Amount appropriated for current fiscal year, ending June 30, 1902.
C. Civil establishment—Continued.			
At navy-yard, New York, N. Y.:			
1 clerk to naval constructor (appropriated)	$1,400.00		
3 writers, at $1,017.25 each (appropriated)	3,051.75		
At navy-yard, League Island, Pa.:			
1 clerk to naval constructor (appropriated)	1,400.00		
1 writer, at $1,017.25 (appropriated)	1,017.25		
At navy-yard, Washington, D. C.:			
1 clerk to naval constructor (appropriated)	1,400.00		
At navy-yard, Norfolk, Va.:			
1 clerk to naval constructor (appropriated)	1,400.00		
2 writers, at $1,017.25 each (appropriated)	2,034.50		
At naval station, Port Royal, S. C.:			
1 clerk to naval constructor (appropriated)	1,400.00		
At navy-yard, Pensacola, Fla.:			
1 writer, at $1,017.25 (appropriated)	1,017.25		
At navy-yard, Mare Island, Cal.:			
1 clerk to naval constructor (appropriated)	1,400.00		
2 writers, at $1,017.25 each (appropriated)	2,034.50		
At navy-yard, Puget Sound, Wash.:			
1 clerk to naval constructor (appropriated)	1,400.00		
		$25,824.25	$25,824.25
D. Increase of the Navy, construction and machinery.			Amount appropriated act of Mar. 3, 1901.
On account of hulls and outfits of vessels, and steam machinery of vessels heretofore authorized (See joint letter below.)	17,303,010.00	17,303,010.00	$21,000,000.00

WASHINGTON, D. C., *September 3, 1901.*

SIR: 1. We have the honor to submit herewith, in duplicate, joint estimates (inclosures 1 and 2) of the amounts required by the bureaus of Construction and Repair and Steam Engineering, under appropriation "Increase of the Navy, construction and machinery," for work on new vessels authorized by Congress to June 30, 1903, as per statements in detail herewith (inclosures 3 and 4), viz:

Sheet D.

Under Bureau of Construction and Repair:		
For fiscal year 1901–1902	$15,766,299	
For fiscal year 1902–1903	13,825,184	
		$29,591,483
Under Bureau of Steam Engineering:		
For fiscal year 1901–1902	9,890,278	
For fiscal year 1902–1903	8,155,493	
		18,045,771
Aggregate		47,637,254
Balance in Treasury available for above July 1, 1901 (less the sum of $260,000 for one gunboat to take the place of the *Michigan* on the Great Lakes, authorized by act approved May 4, 1898, said vessel to be built as soon as permitted under treaty)		30,334,244
Appropriation required for fiscal year 1902–1903		17,303,010

2. This amount, $17,303,010, is the estimated amount required to be appropriated for work on new vessels authorized by Congress for "Increase of the Navy, construction and machinery," for the fiscal year ending June 30, 1903.

Very respectfully,

F. T. BOWLES,
Chief Constructor, U. S. N., Chief of Bureau.

GEO. W. MELVILLE,
Engineer in Chief, U. S. N., Chief of Bureau.

The SECRETARY OF THE NAVY.

VESSELS UNDER CONSTRUCTION.

Progress upon new vessels under construction has been delayed during the past fiscal year by strikes and by delays in the delivery of armor and steel forgings, so that all ships and torpedo boats under construction are more or less behind their contract time of completion.

The tabular statement below shows the degree of completion, on July 1, 1901, of all vessels under contract, and also the probable delay in completion in excess of contract time:

Name.	By whom building.	Estimate of superintending constructor.		Contract time.	Expiration of contract time.	Months behind contract on July 1, 1901.
		Degree of completion July 1, 1901.	Probable date of completion.			
BATTLE SHIPS.		*Per cent.*		*Months.*		
Illinois	Newport News Shipbuilding Co.	96	Sept., 1901	36	Sept. 26, 1899	3.0
Maine	Wm. Cramp & Sons	55	Oct. 1, 1902	32	June 1, 1901	15.5
Missouri	Newport News Shipbuilding Co.	39	Feb., 1903	32	Aug. 30, 1901	17.2
Ohio	Union Iron Works	43	Feb. 5, 1903	32	June 5, 1901	19.0
Virginia	Newport News Shipbuilding Co.		May, 1904	36	Feb. 15, 1904	
Nebraska	Moran Bros. Co		Sept. 9, 1904	36	Mar. 7, 1904	
Georgia	Bath Iron Works		July 1, 1904	36	Feb. 18, 1904	
New Jersey	Fore River Ship and Engine Co.		Feb. 15, 1904	36	Feb. 15, 1904	
Rhode Island	do		do	36	do	
ARMORED CRUISERS.						
Pennsylvania	Wm. Cramp & Sons		Jan. 10, 1904	36	Jan. 10, 1904	
West Virginia	Newport News Shipbuilding Co.		Feb., 1904	36	Jan. 24, 1904	
California	Union Iron Works		May 10, 1904	36	Jan. 10, 1904	
Colorado	Wm. Cramp & Sons	2	Jan. 10, 1904	36	do	
Maryland	Newport News Shipbuilding Co.		Feb., 1904	36	Jan. 24, 1904	
South Dakota	Union Iron Works		May 10, 1904	36	Jan. 10, 1904	
PROTECTED CRUISERS.						
Denver	Neafie & Levy Shipbuilding Co.	49	Oct. 1, 1902	30	June 14, 1902	3.8
Des Moines	Fore River Ship and Engine Co.	39	Aug 1, 1902	30	do	5.0
Chattanooga	Lewis Nixon	35	Jan. 15, 1903	30	do	6.0
Galveston	Wm. R. Trigg Co	31	June 14, 1903	30	do	9.5
Tacoma	Union Iron Works	20	Nov. 14, 1902	30	do	9.0
Cleveland	Bath Iron Works	58	Aug. 15, 1902	30	do	1.5
St. Louis	Neafie & Levy Shipbuilding Co.		Sept. 9, 1904	36	Mar. 11, 1904	6.0
Milwaukee	Union Iron Works		June 17, 1904	36	Apr. 17, 1904	2.0
Charleston	Newport News Shipbuilding Co.		Apr., 1904	36	Mar. 30, 1904	
MONITORS.						
Arkansas	Newport News Shipbuilding Co.	60	July —, 1902	29	Mar. 11, 1901	15.5
Nevada	Bath Iron Works	89	Mar. 15, 1902	29	Mar. 19, 1901	11.4
Florida	Lewis Nixon	67	Feb. 20, 1902	29	Mar. 11, 1901	12.0
Wyoming	Union Iron Works	75	Jan. 5, 1902	29	Mar. 5, 1901	9.0
TORPEDO-BOAT DESTOYERS.						
Bainbridge	Neafie & Levy Shipbuilding Co.	94	Oct. 15, 1901	18	Apr. 1, 1900	18.5
Barry	do	88	Dec. 1, 1901	18	do	20.0
Chauncey	do	90	Nov. 1, 1901	18	do	31.0

Name.	By whom building.	Estimate of superintending constructor.		Contract time.	Expiration of contract time.	Months behind contract on July 1, 1901.
		Degree of completion July 1, 1901.	Probable date of completion.			
TORPEDO-BOAT DESTROYERS—Cont'd.		*Per cent*		*Months.*		
Dale	Wm. R. Trigg Co	96	Jan. 15, 1902	18	May 16, 1900	20.0
Decatur	do	96	Dec. 25, 1901	18	do	19.3
Hopkins	Harlan & Hollingsworth	75	Oct. 31, 1901	18	Apr. 19, 1900	18.4
Hull	do	74	Dec. 31, 1901	18	do	20.4
Lawrence	Fore River Ship and Engine Co.	99	Sept. 1, 1901	16	Apr. 3, 1900	16.9
Macdonough	do	98	Oct. 1, 1901	17	May 3, 1900	16.9
Paul Jones	Union Iron Works	85	Nov. 7, 1901	18	Apr. 5, 1900	19.1
Perry	do	89	Nov. 28, 1901	18	do	19.8
Preble	do	87	Dec. 19, 1901	18	do	20.5
Stewart	Gas Engine and Power Co., etc.	54	May 22, 1902	17	Feb. 28, 1900	26.7
Truxtun	Maryland Steel Co	68	Nov. 5, 1901	18	Apr. 4, 1900	19.0
Whipple	do	67	do	18	do	19.0
Worden	do	67	do	18	do	19.0
TORPEDO BOATS.						
Stringham	Harlan & Hollingsworth	98	Aug. 10, 1901	18	Jan. 29, 1899	30.4
Goldsborough	Wolff & Zwicker	99	Nov. 1, 1901	18	Jan. 30, 1899	33.0
Blakely	Geo. Lawley & Son	98	Aug. 10, 1901	12	Sept. 27, 1899	22.4
De Long	do	98	do	12	do	22.4
Nicholson	Lewis Nixon	90	Sept. 15, 1901	12	Sept. 26, 1899	23.6
O'Brien	do	94	Aug. 29, 1901	12	do	23.1
Thornton	Wm. R. Trigg Co	97	Nov. 1, 1901	12	Nov. 16, 1899	23.5
Tingey	Columbian Iron Works	68	Jan. —, 1902	12	Oct. 1, 1899	27.0
Wilkes	Gas Engine and Power Co., etc.	82	Nov. 15, 1901	12	Sept. 30, 1899	25.5
SUBMARINE TORPEDO BOATS.						
Plunger	Lewis Nixon	15	Mar. 22, 1902	11	Oct. 19, 1901	5.1
Adder	do	70	Oct. 21, 1901	8	Apr. 25, 1901	5.9
Grampus	Union Iron Works	51	Oct. 17, 1901	8	do	5.7
Moccasin	Lewis Nixon	65	Oct. 21, 1901	9	May 25, 1901	4.9
Pike	Union Iron Works	50	Oct. 30, 1901	9	do	5.2
Porpoise	Lewis Nixon	60	Nov. 6, 1901	10	June 25, 1901	4.4
Shark	do	58	Dec. 6, 1901	11	July 25, 1901	4.4

The Department's attention has been specifically called to the probability of two years' delay in the completion of the five battle ships of the *Virginia* class and the six armored cruisers of the *Pennsylvania* class, whose construction has just begun, from the fact that the capacity of the manufacturers of armor is insufficient to provide the amount of armor required for these vessels within the period of time allotted for their construction in the terms of the contracts. Under the present system of purchase of armor, the responsibility for such delays rests with the Government and renders it liable to suits for damages by the ship contractors. On this account, and because it is uneconomical and poor policy to unduly extend the time of construction, it is of importance that the delivery of armor should be adequate to the most prompt work of which the shipbuilders are capable.

The reports of the superintending naval constructors at the works of the various ship contractors are appended to this report, showing in detail the condition of each vessel under construction.

ADDITIONS TO THE NAVY.

There is given below a tabulated statement of data relative to trials and acceptance of vessels since the last annual report:

Name of vessel.	Type.	Date of trial.	Speed required by contract.	Speed obtained on trial.	Date of preliminary acceptance.	Date of final acceptance.	By whom built.
		1900.	*Knots*	*Knots.*	1900.	1901.	
Alabama	Battle ship	Aug. 28	16	17.013	Oct. 22	Aug. 24	Wm. Cramp & Sons.
					1901.		
Wisconsin	do	Oct. 11	16	17.174	Jan. 17		Union Iron Works.
Stockton	Torpedo boat	Nov. 28	26	25.79	Jan. 18		Wm. R. Trigg Co.
		1901.					
Bailey	do	Apr 25	30	30.198	May 29		Gas Engine and Power Co., etc.
Barney	do	May 15	28	29.04	May 31		Bath Iron Works.
Shubrick	do	Apr. 5	26	26.07	May 31		Wm. R. Trigg Co.
Bagley	do	May 16	28	29.15	June 12		Bath Iron Works.
Biddle	do	July 2	28	28.57	Aug. 5		Do.

VESSELS DROPPED FROM THE NAVY.

Name.	Type.	Status.	Disposition.	Appraised value.
Yosemite	Iron single-screw steamer.	Auxiliary Navy	Foundered off Guam Nov. 13 1900.	
Belusan	Gunboat	Regular Navy	Stricken from Navy Register Feb. 11, 1901. Purchased by the War Department.	

STEEL INSPECTION.

The total quantity of ship steel inspected by the Bureau and the amount passed and shipped for incorporation into naval vessels show some decrease from the figures of the preceding year. The total quantity submitted to inspection under the Bureau's requirements during the fiscal year ended June 30, 1901, was about 70,600,000 pounds, as compared with a total of about 75,500,000 for the fiscal year ended June 30, 1900. The distribution of this material among the several districts into which the inspection work is divided, as well as the quantities rejected for various causes, percentages of rejections, etc., are given in the tables, which will be found on pages 13, 14, and 15 of this report.

The great activity in the steel industry and the continued urgent demand for all classes of finished products has at times made it difficult to meet the demands of shipbuilders having contracts for naval vessels.

The production of nickel steel for protective decks and other purposes, combining armor with structural features, has kept pace with preceding years, and reached a total of about 5,130,000 pounds. The improvement in surface and in characteristics upon physical and ballistic tests have been fully maintained, and little difficulty is being experienced in procuring nickel steel of high characteristics in whatever quantity may be required.

In the working of steel at the shipyards practically no difficulties attributable to the character and quality of the materials have devel-

oped. The percentages of rejections for various causes and the percentages of total rejections given in the tables are evidence of the character of the inspection made. The cost of the inspection per ton of material handled will compare very favorably with the charges made by any of the several commercial organizations making testing a business.

The Bureau has found it desirable to define more closely the uses of the several grades of steel which are covered by its specifications. Their characteristics fully cover the range required in high-grade shipbuilding materials. To cover more fully minor points relating to the inspection, to meet some difficulties experienced by manufacturers in the case of some special classes of material, and to provide additional classes of material for special purposes the Bureau, with the approval of the Department, issued revised specifications in June last.

VESSELS SURVEYED.

The vessels given in the table below have been surveyed and repairs authorized during the past fiscal year:

Name.	Where surveyed.	Date of report on survey.	Estimated cost of repairs.
Active	Mare Island	April 11, 1901	$7,460.00
Adams	do	April 1, 1901	2,588.00
Ajax	Norfolk	March 26, 1901	61,798.00
Amphitrite	Boston	October 8 to 10, inclusive, 1900	9,893.00
Bancroft	do	May 9, 1901	6,270.00
Buffalo	New York	November 6, 1900	12,215.00
Do	do	June 6, 1901	17,331.00
Cæsar	Norfolk	March 16, 1901	16,359.00
Chesapeake	do	March 8, 1901	10,940.00
Dixie	New York	August 16, 1900	9,562.00
Frolic	Cavite	May 2, 1901	[1] 2,023.21
Indiana	League Island	March 30, 1901	7,140.00
Iowa	Mare Island	August 29, 1900	3,117.00
Do	Bremerton	March 7, 1901	21,248.00
Iris	Hongkong	May 29, 1901	[2] 8,000.00
Isla de Cuba	Cavite	January 18, 1901	9,538.00
Kearsarge	New York	October 20, 1900	6,405.00
Do	do	May 22, 1901	8,254.00
Lancaster	Boston	March 18–28, 1901	20,000.00
Lebanon	Norfolk	November 19, 1900	39,123.00
Leonidas	League Island	August 23, 1900	12,271.00
Machias	Boston	August 21, 1900	70,100.00
Marcellus	Norfolk	May 3, 1901	33,000.00
Massachusetts	New York	May 27, 1901	12,143.00
Montgomery	do	September 25, 1900	167,155.00
Nanshan	Hongkong	August 20, 1900	[2] 11,000.00
Nero	Norfolk	May 27, 1901	7,243.50
New York	New York	November 6, 1900	103,949.00
Reina Mercedes	Portsmouth	February 6, 1901	316,438.00
Sioux	Norfolk	January 7, 1901	10,260.00
Solace	Mare Island	October 5, 1900	6,390.00
Do	do	March 11, 1901	10,098.00
Southery	Norfolk	do	47,426.00
Standish	do	March 13, 1901	7,120.00
Sterling	Boston	August 10, 1900	8,850.00
Supply	New York	May 29, 1901	164,850.00
Sylph	League Island	August 14, 1901	3,963.00
Texas	Norfolk	March 21, 1901	118,556.00
Topeka	do	April 22, 1901	9,533.00
Triton	Washington	September 11, 1900	3,244.00
Vixen	Norfolk	August 14, 1900	10,972.00
Wheeling	Mare Island	December 24, 1900	33,587.00
Yankton	Portsmouth	August 2, 1900	6,385.00

[1] Gold. [2] Mexican.

The repairs and alterations to vessels made at navy-yards and stations are described in detail in the reports of naval constructors, appended.

RECOMMENDATIONS FOR NEW VESSELS.

The increase of the effective fleet, being a subject of special consideration by the Department, will not be dealt with in this report.

After careful consideration of the needs of the training service, the Bureau recommends for construction six sailing vessels of about 1,900 tons displacement—two for the Pacific coast and four for the Atlantic coast—to be used in the training of apprentices and landsmen for the naval service. The designs for these vessels, already submitted to the Department, are based upon those of the most successful sailing frigates. They will be full-rigged ships, built of steel, with double bottom, enough water-tight subdivision for safety, with sufficient boiler power to distill water and provide for ventilation and flushing of sanitary appliances, and with sufficient room to comfortably carry a crew of 300. The battery will consist of six 4-inch guns and four 6-pounders. The estimated cost is $350,000 each, complete, except armament. The Bureau ventures the opinion that the construction and use of these vessels for the purpose indicated will prove not only the most efficient, but certainly the most economical, method of training boys and men for the seaman branch of the enlisted force.

It may be pointed out that the enlisted force consists, essentially, of two main divisions: First, the artificers, who should begin their duties on board ship as trained mechanics, learning by experience on regular vessels such qualities of the sailor as are necessary; second, the seaman branch, who should be, primarily, sailors, learning by experience in the effective fleet such mechanical aptitude as may be necessary in general service.

In line with this recommendation, to meet the necessities of the training service at the training stations, the Bureau recommends the construction of two small wooden sailing brigs to be used for exercise, one at the training station, Newport, R. I., and one at the training station, San Francisco, Cal., to cost $50,000 each.

The additional naval stations authorized, and the completion of the new dry docks under construction, will require the use of four additional tugs for the service, and the recommendation for their construction is made in order that the tugs may be built and ready for the service at the proper time.

STANDARDIZATION OF FITTINGS.

The Bureau has of late made considerable progress toward the standardization of ship fittings, and has secured toward this desirable end the cooperation of the shipbuilders having contracts with the Department, who realize that the use of standard fittings will decrease delays in the construction of a vessel and reduce its cost. Their use will also simplify, reduce the original cost, and decrease the expense of maintenance of vessels of the Navy.

FIREPROOF WOOD.

The Bureau having conducted an exhaustive investigation of the qualities of fireproofed wood produced by two different processes, has found that the products of both possess desirable qualities in rendering

wood uninflammable, yet fail to show all the desiderata of a fireproof wood, which include the permanent retention of the ingredients under all climatic conditions, freedom from corrosive properties, and unaltered strength and durability. The experience of vessels in commission fitted with fireproofed wood, as well as the tests conducted by the Bureau, showed that there was no practical advantage gained by the use of fireproofed deck planking, or by the use of fireproofed wood below protective decks, and also that owing to the absorptive qualities of this wood its use was objectionable in those locations. Hence the Department has, upon the recommendation of this Bureau, dispensed with the use of fireproofed wood in the Navy, except for such necessary joiner work as may be used above protective decks and on torpedo boats.

SHEATHING OF SHIPS.

Upon the recommendation of this Bureau, the Department has exercised the discretion authorized by Congress and dispensed with the sheathing and coppering of three battle ships of the *Virginia* class and three armored cruisers of the *Pennsylvania* class. The saving in first cost effected thereby will be about $1,000,000, and, in the opinion of the Bureau, the durability of the vessels will be increased.

PHILIPPINE NAVAL STATION.

For the efficiency of the Navy on the Asiatic Station it is essential that the Government should be in possession of a dry dock in the Philippines at the earliest possible moment, both on account of strategical and economical considerations. The number of vessels on the Asiatic Station has made it necessary to dock one of them once about every ten or twelve days throughout the year. Outside of the small vessels, which can be handled by the marine railway at Canacao, our ships must be docked in neutral ports—places where no competition is available and where the cost of work is excessive. The Bureau is strongly of the opinion that only such repairs should be made on foreign stations as are essential to the maintenance of the fleet, and that all extensive overhauling should be done in home ports. The maintenance of the Asiatic Fleet requires the use of a dry dock under the control of the United States, and as the location and construction of a naval station in the Philippines, with suitable graving docks, is a matter necessarily involving considerable time, this Bureau recommends the use for the present of a capacious floating dock, which can be utilized wherever it may be required. In view of emergency use in this connection, the Department, acting on the recommendation of this Bureau, purchased the floating dry dock in Habana, built in England for the Spanish Government. Examination shows this dock to be in very good order, and, within the limit of the sum appropriated by Congress for its purchase, it can be placed in condition for use up to its full capacity of docking vessels up to 10,000 tons displacement. For vessels of smaller size it has been in continuous use in Habana, and full information concerning it has already been submitted to the Department. This Bureau recommends that this dock be sent at once to Olongapo, in Subig Bay, where it can be immediately used to great advantage.

THE CORPS OF NAVAL CONSTRUCTORS.

The Department's attention is earnestly called to the necessity for an increase in the number of officers in this corps, which is now limited by law to a total of forty, a number entirely inadequate to its present needs. For the past twenty years the corps has been continuously recruited from those who have graduated with distinction from the Naval Academy at Annapolis. Before entering upon their duties in the corps these graduates have received a special course of instruction in naval architecture and marine engineering at the technical schools of the Governments of Great Britain and France, and recently of Germany, and also at the University of Glasgow in Scotland. The progress of shipbuilding and the art of naval construction in the United States in recent years, and the introduction of courses of naval architecture in the technical schools of this country having reached a stage at which it was no longer essential for our students to pursue their studies abroad, the Department has, upon the recommendation of this Bureau, assigned three naval cadets to a special course of instruction in naval architecture at the Massachusetts Institute of Technology, where an advanced course has been established with special reference to the necessities of the service.

Owing to the method by which the corps of naval constructors was formerly recruited there will be but one vacancy by retirement in the corps during the next seventeen years. On this account, as well as on account of the great pressure of official duties placed upon the present limited number of constructors, it is most desirable that the regular process of recruiting the corps should be gradually continued by the yearly addition of two or three new appointments. The Bureau therefore recommends that Congress be asked to increase the limit of the corps from forty to sixty, the additions to be made as herein indicated.

IMPROVEMENT OF NAVY-YARD PLANTS.

The improvements of the construction and repair plants at the various navy-yards and stations have proceeded in accordance with the appropriations made and as rapidly as the progress upon the new buildings authorized would permit. The efficiency of these plants is, however, largely limited by the insufficient number of dry docks and modern buildings for the equipment of the yards. The navy-yards, however, continue to present a fruitful field for the application of modern engineering to their mechanical equipment, as well as modern methods of organization to the scheme of administration, which should, if properly applied, result in greater efficiency in the conduct of work and great economy in the general expense, which is now out of proportion to the work done.

WORK OF THE BUREAU.

The work devolving upon the Bureau's staff in the design of new vessels, the supervision of vessels under construction, and the administration of repair work has taxed it to its utmost capacity under present conditions. These conditions have been aggravated by the

lack of space in the Navy Department building available for the technical and clerical staff of the Bureau, and measures have been taken to make the best possible use of the contracted quarters. A systematic reorganization of the drafting force has been made, with a view to increasing its efficiency in the Bureau and offices of naval constructors at navy-yards and at the works of the ship contractors. The Bureau finds a lack of an adequate supply of educated young men suitable for the responsible employment of draftsman, and hopes to attract to this position an increasing number of graduates of technical schools, many of whom have, within recent years, reached positions of responsibility in the shipbuilding industry.

CARPENTERS IN THE NAVY.

The Bureau places great importance upon an efficient corps of carpenters in the Navy as a valuable adjunct to the corps of naval constructors and as a necessary part of the organization for the maintenance of the fleet in service, and takes great interest in securing for this corps an adequate number of intelligent, capable men of thorough mechanical training. The prospects now offered to these warrant officers—an honorable position on board ship, adequate pay, and instructive employment on shore duty—should obtain for the service recruits of a high grade of intelligence if the facts were known. The number of carpenters now afloat is barely adequate to the needs of the service, and the number on shore duty is entirely inadequate for the necessities of this Bureau. The Bureau recommends that, as soon as the demands upon the time of naval constructors and chief carpenters will permit, a school for the instruction of carpenters' mates should be established, as the ability of the mechanics obtained as enlisted men of the fleet as carpenters' mates, shipwrights, plumbers, and painters is of a grade entirely inadequate to the needs of the service.

STEEL INSPECTION.

Summary of work performed by inspectors under the Bureau of Construction and Repair for the districts of Munhall, Pa., Pittsburg, Pa., Phoenixville, Pa., and Chester, Pa., during the fiscal year ending June 30, 1901:

	Munhall, Pa.	Pittsburg, Pa.	Phoenixville, Pa.	Chester, Pa.	Total.
Total amount of steel rolled and inspected (pounds)	41,731,989	17,938,957	9,995,159	944,262	70,610,367
Amount rejected for physical tests (pounds)	7,553,908	1,551,629	1,834,551	24,257	10,964,345
Percentage rejected for physical tests	18.1	8.6	18.35	2.57	15.5
Amount rejected for chemical defects (pounds)	75,180	485,387	160,762	49,005	770,334
Percentage rejected for chemical defects	0.2	2.7	1.61	5.19	1.09
Amount rejected for surface defects (pounds)	8,264,706	1,573,088	776,859	124,431	10,739,084
Percentage rejected for surface defects	19.8	8.8	7.77	13.18	15.2
Total rejections, all causes (pounds)	15,893,794	3,610,104	2,772,172	197,693	22,473,763
Percentage rejections, all causes	38.1	20.1	27.73	20.94	31.8
Amount of finished material shipped (pounds)	20,816,052	11,243,599	7,222,987	746,569	40,029,207

The following table shows the distribution of the material among the vessels building:

Detailed statement of shipments for each vessel for the districts of Munhall, Pa., Pittsburg, Pa., Phoenixville, Pa., and Chester, Pa., for the fiscal year ending June 30, 1901.

Name of vessel, etc.	Munhall, Pa.	Pittsburg, Pa.	Phoenixville, Pa.	Chester, Pa.	Total.
	Pounds.	*Pounds.*	*Pounds.*	*Pounds.*	*Pounds.*
Alabama			1,592		1,592
Arkansas	352,255	84,405	6,870	101,442	544,972
Boston			61,194		61,194
Baltimore		32,161			32,161
California	244,876				244,876
Cleveland		142,056	428,603		570,659
Colorado	1,624,047	224,779			1,848,826
Chattanooga		161,806	1,368,168		1,529,974
Denver	527,247	252,063	8,440	242	787,992
Des Moines	132,540	682,821	565,615		1,380,976
Florida	138,897	152,705	47,388	73,627	412,617
Galveston	679,370	561,332			1,240,702
Georgia	286,537	6,933			293,470
Illinois	30,837	171,831	6,628	26,605	235,901
Maine	1,901,551	531,421	281,170	157,644	2,871,786
Maryland	286,880	517,462			804,342
Missouri	6,045,593	1,542,238	493,404	141,881	8,223,116
Nevada	76,612	40,792		87,123	204,527
New Jersey	593,145				593,145
Ohio	1,086,658	957,164		31,990	2,075,812
Pennsylvania	1,020,076	194,137			1,214,213
Panther	79,222	169,506			248,728
Prairie		80,523			80,523
Rhode Island	560,505				560,505
Rainbow	61,826	19,420			81,246
Reina Mercedes		184,428			184,428
South Dakota	180,505				180,505
St. Louis	80,772				80,772
Tacoma	528,165	883,175			1,411,340
West Virginia	245,468	535,076			780,544
Wyoming		184,493			184,493
Torpedo-boat destroyers			112,969	83,586	196,555
Torpedo boats		243	24,020	4,475	28,738
Holland torpedo boats	617,419	194,015	46,629	13,027	871,090
Miscellaneous	1,412,618	78,740			1,491,358
Navy-yard contracts and requisitions	2,022,531	2,657,874	3,771,889	23,335	8,475,629
Total	20,816,052	11,243,599	7,222,987	746,569	40,029,207

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SUMMARY SHOWING THE NUMBER OF VESSELS IN THE UNITED STATES NAVY.

REGULAR NAVY.

FIRST-CLASS BATTLE SHIPS	17
SECOND-CLASS BATTLE SHIP	1
ARMORED CRUISERS	8
ARMORED RAM	1
STEEL SINGLE-TURRET MONITORS	4
DOUBLE-TURRET MONITORS	6
IRON SINGLE-TURRET MONITORS	8
PROTECTED CRUISERS	23
UNPROTECTED CRUISERS	4
GUNBOATS	13

SUMMARY SHOWING THE NUMBER OF VESSELS IN THE UNITED STATES NAVY—Continued.

LIGHT-DRAFT GUNBOATS	3
COMPOSITE GUNBOATS	6
TRAINING SHIP (NAVAL ACADEMY), SHEATHED	1
SPECIAL CLASS	2
GUNBOATS UNDER 500 TONS	21
TORPEDO-BOAT DESTROYERS	16
STEEL TORPEDO BOATS	35
SUBMARINE TORPEDO BOATS	8
WOODEN TORPEDO BOAT	1
IRON CRUISING VESSELS, STEAM	5
WOODEN CRUISING VESSELS, STEAM	6
SAILING VESSELS, WOODEN	7
TUGS	39
WOODEN STEAM VESSELS UNFIT FOR SEA SERVICE	11
WOODEN SAILING VESSELS UNFIT FOR SEA SERVICE	6
TOTAL NUMBER OF VESSELS IN REGULAR NAVY	252

AUXILIARY NAVY.

AUXILIARY CRUISERS	5
CONVERTED YACHTS	23
COLLIERS	16
SPECIAL CLASS	11
TOTAL NUMBER OF VESSELS IN AUXILIARY NAVY	55
GRAND TOTAL	307

STANDARD BOATS IN THE UNITED STATES NAVY.

Type of boat.	Length, extreme.	Breadth, extreme.	Depth from top of gunwale to lower edge of rabbet.	Weight. Hull.	Weight. Total, including outfit.	Maximum number of men boat will carry.	Weight of provisions and water.	Corresponding freeboard.	Sail area.	Area of load water plane service condition.
	Ft. in.	*Ft. in.*	*Ft. in.*	*Lbs.*	*Lbs.*		*Lbs.*	*Ft. in.*	*Sq. ft.*	*Sq. ft.*
Steam cutters	50 0	10 0	5 3	13,591	31,398	75	750	2 9⅜	307	312
	40 0	9 0	4 7⅛	8,064	18,720	60	600	1 9½	372.4	212.8
	36 0	8 9	4 6	7,037	16,001	53	530	1 9½	318.58	182.6
	33 0	8 7	4 5	5,510	13,476	48	480	1 9½	301.90	172.5
	30 0	8 0	4 2	4,390	10,901	40	400	1 8⅜	283.75	145
	28 0	7 8	4 0⅜	4,007	9,470	35	350	1 7⅜	218.82	125
Launches	33 0	9 3	3 8	3,591	5,910.5	64	640	1 10½	505.50	168.5
	30 0	8 6	3 5	2,705	4,797.5	50	500	1 9½	458.25	152.75
	28 0	7 5	2 8	.....	3,800	40	400	1 1½	290	143
Cutters	30 0	8 0	2 10	2,262	3,384.5	45	450	1 4	315	126
	28 0	7 5	2 8	1,952	3,006.5	40	400	1 2½	290	114.75
	26 0	6 11	2 6	1,560	2,526.5	30	300	1 0	240	94.5
	24 0	6 6	2 6	1,142	2,059.5	28	280	1 0	209	91
	20 0	5 3	2 1	453	1,092.3	12	120	1 1⅛	142.8	66.5
Barge	30 0	6 11	2 8	1,712	2,960	38	380	1 0⅛	293.75	117.5
Whaleboats	30 0	6 10	2 5	1,767	2,722.25	28	280	1 1⅜	287.75	111.5
	29 0	6 8	2 5	1,499	2,441.75	25	250	1 0⅞	260	104
	28 0	6 6	2 5	1,346	2,268.25	22	220	1 1⅜	240	96
	24 0	5 11½	2 2⅛	1,050	1,888.50	18	180	1 1⅛	178.65	77
	20 0	5 3	2 1	485	1,090.75	10	100	1 1⅛	137	58
Gig whaleboats	30 0	6 2	2 5	1,365	2,391.25	20	200	1 2⅛	236.8	94.75
	28 0	6 0	2 5	1,140	2,139.25	16	160	1 2⅛	212.5	85
Dingeys	20 0	5 6	2 2	710	1,279.50	12	120	1 2⅛	134.4	59.7
	18 0	5 4	2 1	612	1,150.50	10	100	1 0⅛	126.32	56.14
	16 0	4 6	1 10	324	684.75	5	50	0 11⅛	88.4	39.25
	14 0	4 4	1 8	250	549.75	4	40	0 8⅜	71	34.5

Very respectfully,

F. T. BOWLES,
Chief Constructor, U. S. N.,
Chief of Bureau.

The SECRETARY OF THE NAVY.

REPORT OF THE CHIEF OF BUREAU OF STEAM ENGINEERING.

DEPARTMENT OF THE NAVY,
BUREAU OF STEAM ENGINEERING,
Washington, D. C., October 1, 1901.

SIR: 1. In obedience to your order of August 13, 1901, the following annual report of the operations of this Bureau during the fiscal year ending June 30, 1901, together with the estimates for the fiscal year ending June 30, 1903, is respectfully submitted:

Appropriations, steam machinery, 1900–1901.

Amount appropriated for fiscal year ending June 30, 1901, act approved June 7, 1900	$2,560,000.00
Amount appropriated for fiscal year ending June 30, 1901, deficiency act approved March 3, 1901	600,000.00
Total	3,160,000.00

Labor in navy-yards and stations in repair of steam machinery, boilers, etc., of naval vessels fitting for sea service, preservation and repair of tools, handling and preservation of materials, stores, etc	$1,400,525.53	
Purchase of materials, stores, machine tools, freight, and incidental expenses	904,283.59	
Payments for repairs, materials, freight, and incidental expenses for ships on foreign stations	387,264.33	
Total	2,692,073.45	
Less refunds by transfers in adjustment of appropriations	36,732.99	
Total expenditures		$2,655,340.46
Balance in Treasury September 1, a portion being required to pay outstanding obligations		504,659.54

GENERAL OPERATIONS OF NAVY-YARDS AND STATIONS AND THEIR REQUIREMENTS.

PORTSMOUTH NAVY-YARD.

There is but one building (the iron foundry) in this yard which is exclusively assigned to this Bureau and this is of wood and about to be removed for improvements. All the buildings are old, poorly arranged, badly lighted, and quite unsuited to the demands constantly made upon a modern engine-building and repair plant.

The principal building is neither fireproof nor safe under the heavy loads to which its floors are sometimes necessarily subjected, and modern appliances, like traveling cranes, pneumatic and electric motors, with their many resultant accessories, can not be installed in structures designed and erected long before their use was even thought of.

The location of the new dry dock and the necessary space around it may require the demolition of some portions of these buildings, while the proximity of other buildings, many of them new, makes it impossible to add to them.

Under these circumstances the Bureau is obliged to request that an entirely new set of buildings be provided for its shops and located on the east side of the new dry dock, where there will be ample space and where the ground is well adapted for such construction. The new buildings should be machine, boiler, copper, blacksmith, and pattern shops, foundry, office building, and power house, so arranged as to form a quadrangle, with ample space for light and ventilation and access to the center court.

The buildings should be of but one story (except the office building, which should be of two, with upper one arranged for a drawing-room), built of steel and masonry and made as nearly fireproof as possible. Ground plans for these buildings have been prepared and submitted to the Bureau of Yards and Docks.

Such an outfit as proposed would not be very expensive and would place the yard in a condition to carry on the special work now almost wholly done there, such as the construction of steam cutter machinery, much more expeditiously and economically than at present, as well as all repair work to ships.

The Steam Engineering shops at this yard also require some additional tools to put them in proper condition as a modern engine build-

ing and repair plant, and the sum of $100,000 has been submitted in the estimates of appropriations for this Congress.

During the last year repairs have been made to the machinery of the following vessels, or stores and outfits have been prepared for them: *Alvarado*, *Craven*, *Dahlgren*, *Detroit*, *Eagle*, *Nezinscot*, *Piscataqua*, *Potomac*, *Raleigh*, *Reina Mercedes*, *Sandoval*, *Yankton*.

A large number of steam-cutter engines have been built.

The old machinery has been entirely removed from the *Reina Mercedes* and a complete new set, similar to that in the *Hartford*, is to be built and installed, utilizing four boilers removed from the *Raleigh*.

Considerable work in the way of making castings, repairs to boilers, etc., has been done for the other departments of the yard.

The expenditures during the fiscal year at this yard amounted to..... $207,881.77

BOSTON NAVY-YARD.

Repairs, some of them very extensive, have been made to the machinery of the following vessels, or stores and outfits prepared for them: *Amphitrite*, *Bancroft*, *Dolphin*, *Essex*, *Foote*, *Fortune*, *Hannibal*, *Hartford*, *Iwana*, *Lancaster*, *Leyden*, *Machias*, *Mayflower*, *Minnesota*, *Newport*, *Olympia*, *Osceola*, *Peoria*, *Potomac*, *Prairie*, *Scorpion*, *Sterling*, *Texas*, *Topeka*, *Vicksburg*, *Wabash*.

The following vessels have been laid up in ordinary and their machinery cared for: *Bancroft*, *Machias*, *Sterling*, *Peoria*, *Vesuvius*.

Considerable work has been done for the Departments of Ordnance, Construction and Repair, Equipment, and Yards and Docks.

Machinery has been fitted in a number of steam cutters.

A number of the large tools in machine shop No. 1 have been erected on new foundations, refitted, and made ready for use. In machine shop No. 2 the tools were rearranged so as to allow traveling cranes to be installed on each side of the shop. Twenty-five new machine tools have been obtained on contract and set up. The heating system has been rearranged so as to use the exhaust from the shop engines and a fire-protection system installed.

In the boiler shop the heavy tools have been overhauled and refitted and a new radial drill set up; exhaust pipes were fitted over the forges to carry off the smoke.

The pattern shop will be rearranged as soon as the new floor is fitted.

A power hydraulic pump for the pipe-bending machines and a pipe-testing outfit have been installed in the coppersmith shop.

Power has been applied to the lift to supply the furnaces in the foundry in place of hand gear and an oven for small cores has been built. This latter will use waste gases from the furnaces.

American underfeed automatic stokers have been fitted under the main boilers as an experiment, and a Ward boiler has been set up for tests requiring a high steam pressure.

Regular quarterly inspections have been made of the steam generators in the yard and necessary repairs made at times of inspections.

When the changes and repairs now in progress have been completed and some additional tools obtained, the shops at this yard will be well adapted for all classes of work. The location of the yard, near unlimited supplies of all kinds of materials and skilled labor, is also especially favorable for the prompt and economical performance of work.

The expenditures during the fiscal year at this yard amounted to..... $345,561.36

TRAINING STATION, NEWPORT, R. I.

There is a small shop, well kept up, at this station containing some tools of moderate size, and the work has been principally in the repair of steam-cutter machinery.

Small repairs to the machinery of several vessels have also been made at the ordnance shop at the torpedo station.

NEW YORK NAVY-YARD.

Since my last report was written the machine shop, erecting shop, pattern shop, smithery, and administration building have been completed (except 48 feet of the erecting shop, for which there were no funds), and the power house nearly completed. As these buildings taken together are believed to be unexcelled for their purpose by any in the world, a brief description may be of interest.

The machine and erecting shops and smithery are built entirely of steel, glass, and masonry and are as nearly fireproof as it is possible to make them. The machine shop is 350 feet in length by 130 feet in width; the erecting shop is but 300 feet in length by the same width. In both these shops glass has been used wherever practicable and the result is that there is not a dark or badly lighted spot in either of them. In the machine shop there is a central aisle, 70 feet in width, in which are located the heavy tools, and two runways for electric overhead traveling cranes; on the upper of these runways is a 25-ton, 3-motor electric crane having a speed of hoist of from 3 to 10 feet per minute for full load and of 3 to 20 feet per minute for light load; bridge travel on runway, 40 to 250 feet per minute, and speed of trolley on bridge, 20 to 150 feet per minute.

On the lower runway are two 3-motor, 10-ton electric traveling cranes having speed of hoist of 6 to 30 and 10 to 65 feet per minute for full and light loads; of bridge travel of 50 to 300 feet per minute, and of trolley on bridge of 30 to 200 feet per minute. These cranes command the whole of the center aisle for its entire length.

As before stated, the heavy tools are located in the center aisle, under the cranes, and each is driven by an independent electric motor directly attached to it. After careful study of the best existing practice, induction motors were selected as the best suited for this purpose, and this style of motor has been adopted.

The smaller tools are grouped in the side aisles and driven by belts from overhead shafting, enough tools to require a motor of 5-horse power being generally grouped together.

The erecting shop is similar in construction to the machine shop, but is shorter, sufficient funds not having been appropriated, as before stated. On its upper craneway is a 4-motor, 40-ton electric traveling crane, having speeds of hoists of 3 to 8 and 5 to 16 feet per minute for heavy and light loads; speed of bridge on runway, 40 to 250 feet per minute, and speed of trolley, 20 to 150 feet per minute. On the lower craneways are two 10-ton electric cranes similar in all respects to those in the machine shop.

For heating and ventilating these shops fresh air is drawn over coils of steam pipes, and then well distributed over the entire interiors by blowers and ducts led overhead. The lighting will be by both arc and incandescent lights.

All the tools formerly in the temporary shops have been moved into the new machine shop, together with a large number of more powerful ones lately obtained on contract. To drive them, till the completion of the power plant, direct current from the traveling cranes is obtained from the yard, and for the tools having induction motors a borrowed alternator has been set up in the foundry and driven by an engine formerly in one of the temporary shops.

An extension for a smithery has been built on the boiler shop, making the building 340 feet in length by 96 feet in width. In the boiler shop is a very fair collection of heavy tools and traveling cranes. The smithery is now being supplied with steam hammers and forges, together with the other necessary fittings, and heavy work will be handled by cantilever jib cranes, fitted with electric motors for operating the hoists and trolleys.

The machine, erecting, boiler, and smith shops form three sides of a hollow square. In the center court are located the wash rooms and latrines, all extremely light, well ventilated, and fitted with modern open plumbing.

There is a large and well-appointed tool room connected with the machine shop. There is also a large test room, with full equipment of machines for the physical testing of materials, as well as a complete outfit for repairing and standardizing gauges, indicators, and other instruments.

Directly opposite the quadrangle formed by the shops just described, and distant but 60 feet, is the power house. This is a steel and masonry building 100 by 60 feet, and contains the engines, boilers, and generators for supplying the current by which the entire series of shops is to be driven.

There are three Babcock & Wilcox water-tube boilers of 400 horsepower each, with automatic stokers and self-feeding coal apparatus. As the rating of the boilers is on a basis of the consumption of 30 pounds water per horsepower, they can easily be run at a much higher power.

There are three McIntosh & Seymour vertical, cross-compound engines, each driving one Westinghouse two-phase alternator; the revolutions are 136 per minute, and the output 400 kilowatts at 220 volts and 3,000 alternations per minute. The excitation is by two independent and separate exciters, one steam driven and one motor driven, the steam-driven one being of low speed. Each of these exciters is capable of exciting the fields of two of the generators when carrying the full rated load.

There are two surface condensers, each with its own air and circulating pumps, driven by electric motors. Salt water is used for condensing purposes.

Coal is carried to bins at the top of the building and thence fed to the furnace mouths by chutes. There are means provided for hand firing in case of disarrangement of the automatic stokers. There are also conveyors to carry ashes and refuse from the ash pits.

The feed pumps are independent of the engine and are both steam and motor driven.

In the power house are also located the switchboards, of marble panels, containing all necessary instruments and appliances for the control and operation of the generators.

The new pattern shop is a two-story brick building, detached, and

made as nearly fireproof as possible by thickly covering the floors, beams, columns, etc., with refractory material.

The upper floor only is used as a pattern shop. It is well lighted by skylights in the roof and contains a full assortment of woodworking machinery, workbenches, etc. It is also provided with an exhaust system by which all the shavings and sawdust from the power tools is carried from the shop and delivered into a crematory, where they may be burned or, if preferred, carted away.

The lower story contains metal racks for storing patterns and lumber, over which is carried an extensive system of perforated iron pipes connected with the fire main, so that in case of need the whole interior can be flooded without entering the building.

The shop will ultimately be driven by electric motors, but, pending the completion of the power house, two engines that formerly drove the circulating pumps on the *Cincinnati* have been set up and connected to the main shaft. Steam for these engines is led underground from the foundry boilers.

These engines are doing so well that they will be allowed to remain for an emergency after the motors are installed.

The administration building is also of two stories and detached. In its construction fireproofed wood has been used for flooring, wainscoting, etc., where metal or masonry could not well be employed. The lower story contains the offices, library, closets, etc., as well as a large fireproof vault, and the upper one is entirely given up to drawing rooms, blue-print room, and dark room.

In this building is a complete telephone service with all the shops, the yard, and outside; watchman's clock and fire alarm connected with all the buildings.

The foundry building was erected in 1863 and nothing has been done to it since except to install electric cranes. The walls and chimneys are badly in need of repairs, as much of the cement has been washed out the joints from long exposure to the weather. The roof beams are of wood and dry rotten in places. A new fireproof roof should be provided, and request for this has been made on the Bureau of Yards and Docks.

The blowers, cupolas, and furnaces in the foundry have been in use for nearly forty years and are entirely worn out. Contract has been made for new ones, of modern design and construction, and when these are erected the foundry will be in condition to do any work required of it, which it certainly is not at this time.

The very large increase in number, length, and complexity of the copper pipes made necessary on a modern ship by the great number of auxiliary engines now employed has taxed the copper shop far beyond its capacity, and it has been found necessary to encroach on the foundry to obtain necessary floor space.

For this reason it is recommended that an extension 30 feet in width be built along the west side of the foundry building to afford the necessary floor space for the copper shop.

During the year work has been done on the machinery of the following naval vessels, or stores and outfits have been prepared for them: *Alabama*, *Albany*, *Alliance*, *Alvarado*, *Apache*, *Atlanta*, *Baltimore*, *Bancroft*, *Bennington*, *Brooklyn*, *Buffalo*, *Callao*, *Castine*, *Chicago*, *Chickasaw*, *Cincinnati*, *Culgoa*, *Cushing*, *Dixie*, *Don Juan de Austria*, *Dupont*, *Elfrida*, *Ericsson*, *Foote*, *General Alava*, *Glacier*,

Gwin, *Hartford*, *Helena*, *Indiana*, *Iowa*, *Isla de Luzon*, *Isla de Cuba*, *Kearsarge*, *Kentucky*, *Lancaster*, *McKee*, *Mackenzie*, *Manila*, *Marietta*, *Massachusetts*, *Mayflower*, *Michigan*, *Monadnock*, *Monongahela*, *Montgomery*, *Morris*, *Narkeeta*, *Nashville*, *Newark*, *New Orleans*, *New York*, *Nina*, *Oregon*, *Osceola*, *Pawnee*, *Pontiac*, *Porter*, *Powhatan*, *Prairie*, *Princeton*, *Puritan*, *Rainbow*, *Raleigh*, *Restless*, *Rodgers*, *Scorpion*, *Somers*, *Stirling*, *Supply*, *Talbot*, *Texas*, *Traffic*, *Vermont*, *Wilmington*, *Winslow*, *Wompatuck*, *Yorktown*, *Yosemite*.

Besides the above a large amount of work has been done in installing new tools in machine, pattern and boiler shops, smithery and foundry; conduits have been laid for steam pipes and for the wiring in the different buildings; a number of evaporators and distillers have been made; machinery has been fitted in a number of steam cutters; the floating derrick has been thoroughly overhauled.

A number of tests of material have been made for the Inspection Board; also of various kinds of coal and of oil-fuel burners.

Work has been done for all the other departments of the yard in the way of repairs to boilers, making a large number of castings in iron and brass for various purposes, overhauling machinery, etc.

The expenditures at this yard during the fiscal year amounted to.... $1,031,813.10

LEAGUE ISLAND NAVY-YARD.

The following vessels have been laid up in ordinary during the year and their machinery cared for in strict accordance with special order No. 95; some of them have since been placed in service: *Catskill*, *Katahdin*, *Jason*, *Montauk*, *Lehigh*, *Mahopac*, *Nahant*, *Canonicus*, *Manhattan*, *Leonidas*, *Pompey*, *Arethusa*, *Miantonomoh*, *Yankee*, *Minneapolis*, *Columbia*, *Panther*, *Dorothea*, *Somers*, *Powhatan*.

Work has been performed on the machinery of the following vessels or stores and outfits prepared for them. In some cases the work was very extensive and involved an almost entire rearrangement of the auxiliaries and rebuilding of the motive machinery: *Alabama*, *Arethusa*, *Columbia*, *Dorothea*, *Indiana*, *Leonidas*, *Pompey*, *Miantonomoh*, *Minneapolis*, *Modoc*, *Panther*, *Powhatan*, *Resolute*, *Richmond*, *Yankee*, *Katahdin*, *Saratoga*.

Machinery was fitted in a number of steam cutters.

Necessary repairs were made to the power tools in the various shops. Steam generators were inspected, tested, and repaired where necessary.

Work, principally making and fitting iron and composition castings, etc., has been done for the departments of Equipment, Yards and Docks, and Construction and Repair.

The great advantages of this location for a general building and repair station have been fully recognized and Congress has appropriated the amount necessary to construct all the shops requisite for this Bureau except a power house, pattern shop, and administration building.

Plans for all buildings appropriated for are well advanced and contracts for their erection can soon be made. When erected these shops will form a collection unexcelled for completeness and convenience by any in the world.

In the plan finally adopted for these buildings the machine, smith, boiler, and copper shops form a cross, the center portion, 90 by 400 feet, being intended for the former shop and the two arms for the others. This form of structure affords perfect light, ventilation and

access, and permits the necessary space for scrap yards, etc., to be in the immediate vicinity of each shop.

The foundry, pattern shop, and office building will be detached, as they should be, and located in the adjacent square.

All buildings, except that for offices and drawing room, will be of one story and as nearly fireproof as it is possible to make them.

The last Congress authorized, in the appropriation act, the equipment of the entire new system of steam-engineering shops at this yard, with the necessary power plant, machine tools, cranes, and appliances for handling work for building and repairing modern marine machinery, to cost not more than $230,000, and $100,000 was appropriated to commence the work. The balance, $130,000, is included in the estimates submitted for the next Congress. Specifications are being carefully prepared for these tools and appliances, and contracts will be made therefor as soon as the buildings are far enough advanced to warrant it.

The expenditures at this yard during the fiscal year amounted to $177,639.01

NORFOLK NAVY-YARD.

During the year the building for the blacksmith and coppersmith shops has been completed and the necessary outfit for each shop is being purchased, which, when installed, will enable this class of work to be performed expeditiously and economically. The present coppersmith shop will be fitted for a pipe-fitting shop. The removal of the blacksmith shop will allow the whole of the building in which it now is to be used for boiler work, the additional space thus acquired being very much needed.

An appropriation for a building to be used as a pattern shop has been made, but no suitable place has yet been found on which to erect it. The building naturally should be in close proximity to the foundry, but the space in this vicinity is all needed for other purposes. If the land back of the yard could be purchased and added, then a suitable place close to the foundry could be obtained and leave the required space for scrap, molding material, etc.

A small building is very much needed to be used as a paint shop. Using part of a large building for this purpose, on account of the combustible nature of the material, is dangerous.

Appropriation has also been made for repairs and alterations to the present machine and boiler shops and the work is now in progress. The plan adopted is to move all the heavier tools into the shop made by roofing over the space between two buildings and to improve the light and ventilation of the old machine shop by removing a portion of the second floor and rearranging most of the tools. While this plan will not be so satisfactory as a new building would be, it will be a vast improvement on the present arrangement, and will enable work of all kinds to be done much more expeditiously and economically.

There should also be an emergency machine shop, fitted with the proper tools, near or adjoining the "fitting-out basin" now being built. The main machine shop is well situated for work on vessels while in the dry docks, but as a considerable part of the work on any vessel will be done while she is lying in the basin, and as a great deal of this work will be of a light nature, much time will be lost by the employees in traveling between ships and the main shop; therefore the emer-

gency shop should be near the basin. That portion of building No. 39 now occupied by Yards and Docks electric plant (which will soon be moved into their new building), although not quite as large as desirable, could be utilized for this purpose; or, if about 100 feet in length of the north end of building No. 31 could be obtained it would afford a better and more ample shop.

During the last few years the use of compressed air as a motor has rapidly extended. There is installed here a pair of Westinghouse air compressors, from which the air is carried by pipes to the different parts of the several shops. These compressors, however, are not large enough, and it is with difficulty that a pressure of 70 pounds is maintained, while a pressure of 100 pounds is desirable for the various pneumatic tools. These tools have been found to be very efficient on board ships under repair. Such work as scaling boilers can be done in about one-third the time it takes by the old method. Auxiliary machinery can also be tested as soon as repairs are completed, by using compressed air, instead of waiting until it is convenient to get up steam.

Work during the year has been done on the machinery of the following vessels, or stores and outfits have been prepared for them: *Ajax*, *Alexander*, *Alliance*, *Alice*, *Alvarado*, *Amphitrite*, *Annapolis*, *Apache*, *Cæsar*, *Chesapeake*, *Cushing*, *Dale*, *Decatur*, *Dixie*, *Dupont*, *Eagle*, *Ericsson*, *Essex*, *Foote*, *Fortune*, *Franklin*, *Frolic*, *Glacier*, *Gwin*, *Hannibal*, *Hawk*, *Hercules*, *Hist*, *Illinois*, *Indiana*, *Iowa*, *Kearsarge*, *Kentucky*, *Lebanon*, *Leonidas*, *Manley*, *Marcellus*, *Massachusetts*, *Mayflower*, *Mohawk*, *Newport*, *Nezinscot*, *Nero*, *Piscataqua*, *Pompey*, *Porter*, *Puritan*, *Potomac*, *Peoria*, *Rodgers*, *San Francisco*, *Shubrick*, *Siren*, *Sioux*, *Southery*, *Standish*, *Stockton*, *Saturn*, *Sylph*, *Samoset*, *Texas*, *Topeka*, *Terror*, *Triton*, *Vixen*, *Wasp*, *Wilmington*, *Winslow*, *Wompatuck*, *Wahneta*.

Machinery has been fitted in a number of steam cutters.

Considerable work has been done for other departments, such as making castings, repairs to machinery, etc.

Improvements have been made to shops and tools and preparations made for a complete rearrangement.

The expenditures at this yard during the fiscal year amounted to..... $369,602.34

NAVAL STATION, PORT ROYAL, S. C.

This Bureau has no representative of its own at this station and no facilities for doing work under its cognizance, so that all work pertaining to it is now performed with the facilities loaned by other departments and transfers of labor therefrom. The supervision of this work has been under an officer who is head of three other departments, besides having numerous additional duties to perform, as captain of yard, charge of recruiting rendezvous, etc., which is much more than one person, without proper assistance, can attend to.

Notwithstanding these drawbacks, repairs, though none of considerable extent, have been made to the machinery of the following vessels: *Accomac*, *Amphitrite*, *Essex*, *Hercules*, *Lancaster*, *Massasoit*, *Penacook*, *Peoria*, *Potomac*, *Topeka*, *Yankton*, and yard launches.

In case of war or other emergency, the station, so far as this Bureau is concerned, is wholly unprepared for the calls that would be made on it.

A steel and brick shop building, 242 feet 4 inches by 92 feet 8 inches, with boiler rooms 50 feet 4 inches by 31 feet 4 inches, was completed during the year, with the exception of craneway and flooring, and turned over to this Bureau. A two-story office building was also completed.

A complete list of tools has been prepared for this shop, but the requisitions for them have been held back on account of the transitory state of the station and the recommendations of various boards concerning it. If it is finally decided to continue it as a regular naval station, a complete outfit of additional shops and facilities for work should be supplied this Bureau, and the Bureau of Yards and Docks has been requested to submit an estimate for an appropriation therefor.

NAVAL STATION, KEY WEST, FLA.

Repairs, some of considerable extent, were made to the machinery of the following naval vessels: *Accomac*, *Bancroft*, *Eagle*, *Leonidas*, *Massasoit*, *Osceola*, *Potomac*, and yard launches.

Also to the following vessels belonging to the Treasury Department: *Mangrove*, *Blake*.

Also to the following merchant vessels: *Bolivar*, *Fanita*, *Florida*, *Nigretta*, *Culdoon*.

Work was done for other departments as follows:

Yards and Docks.—Ironwork for new roofs on buildings at station; repairs to cars and tracks; made new smoke pipe for boiler of pumping plant; repairs to fire engine and railroad traveling crane; piping from roofs to cisterns and from station to wharf.

Equipment.—Repairs and alterations to the distilling plant at this station and at Tortugas; repairs to coal hoisting and handling machinery; repairs to barges 7, 8, 9.

Construction and Repair.—Repairs to barges 1, 8, 9, and various jobs on vessels.

Some small castings were made for the Engineer Department of the Army.

Work has also been done for the Key West city water works, the Brown Hoisting and Conveying Machine Company, the Key West Electric Company, and several private parties, in compliance with the instructions in the Department's letter No. 9284, of 16th November, 1898.

Many improvements have been made in the interior arrangement of the shops, and a number of new tools have been made or purchased and installed. Further improvements in this line are still in progress.

Appropriation has been made for a building for blacksmith, coppersmith, and sheet-iron work, and it is proposed to erect this at the north end of the machine shop. When completed, all of the tools will be moved into it from the temporary annex and some from the machine shop and a new engine set up, with necessary shafting, etc. Forges and furnaces will be built, and the resources of the station will be greatly increased.

From its isolated position and distance from sources of supply of both labor and material, it has never been deemed advisable to make this either a first-class building or repair station, but to confine its resources to making ordinary repairs to naval vessels needing them and emergency repairs to merchant ships passing by, and for these

purposes the shops will be well adapted as soon as the new smithery has been completed.

The expenditures at this station during the fiscal year amounted to..... $10,593.29

NAVY-YARD, PENSACOLA, FLA.

This Bureau has a small shop with a few tools, mostly antiquated, at this yard. In case of emergency small repairs only could be made to the machinery of naval vessels.

Work during this year has been preserving the plant from deterioration, small repairs to steam cutters and tugs *Schuyo* and *Potomac;* making small articles for *Massachusetts*, *Kearsarge*, and *Leonidas*.

With a moderate expenditure for some additional power tools, the yard could be placed in condition to do nearly all kinds of repair work.

The expenditures at this yard during the fiscal year amounted to..... $9,542.22

NAVAL STATION, ALGIERS, LA.

This Bureau has no shops of any kind at this station, and no work has been done under its cognizance during the past year.

There is a small appropriation available for a machine shop (but so far nothing has been done toward its erection), and also an appropriation for power tools.

NAVAL STATION, NEW LONDON, CONN.

This Bureau has no plant of any kind at this station, and no work has been done under its cognizance during the last year.

MARE ISLAND NAVY-YARD.

The shops at this yard are inconveniently located, being at a great distance from the dry docks, and not well adapted to modern tools and methods.

Appropriation has been made for a new machine shop, and work on same has been commenced, but there are no funds available for the other shops which are equally needed and for which plans have been prepared.

As the entire collection of buildings now occupied by Steam Engineering is desired for use of another department of the yard, the need of new ones for this Bureau can not be too strongly urged upon Congress and the necessity for an immediate appropriation therefor.

Authority was given by the last Congress in the appropriation act to equip the entire new system of Steam Engineering shops at this yard with the necessary power plant, machine tools, cranes, and appliances for handling work and for building and repairing modern marine machinery, to cost not more than $180,000, and $100,000 was appropriated to commence the work; the balance, $80,000, is included in the estimates submitted for the next Congress.

The necessary buildings should be at once provided, so that there may be no delay in the installation of these tools and appliances when delivered.

Work has been done on the machinery of the following vessels during the year, or stores and outfits prepared for them: *Alert*, *Mohican*, *Justin*, *Nero*, *Adams*, *Farragut*, *Philadelphia*, *Ranger*, *Solace*, *Boston*, *Marblehead*, *Wheeling*, *Active*, *Unadilla*, *Vigilant*, *Nellie*, *Independence*, *Fox*, *Davis*, *Wisconsin*.

Work has also been done on the machinery of the light-house tender *Madrono* and the revenue steamers *Manning* and *Thetis*. A new boiler has been constructed for the *Perry* and is ready for installation.

A considerable number of engines have been built for steam cutters.

Work in the way of making castings, overhauling machinery, etc., has also been done for the other departments of the yard.

The expenditures at this yard during the fiscal year amounted to..... $478,260.07

PUGET SOUND NAVY-YARD.

During the last year a building to serve as a machine shop has been completed, with the exception of flooring and craneway, and a small assortment of machine, boiler-making, and woodworking tools, together with the necessary engine, boilers, and shafting set up. This is at best but a makeshift, and additional buildings should be furnished at once.

The sum of $125,000 has been submitted in the estimates for appropriations for fiscal year ending June 30, 1903, to continue the equipment of the steam-engineering shops at this yard with the necessary power plant, machine tools, and appliances for handling work.

Notwithstanding the incompleteness of the equipment a very considerable amount of work has been done, as appears from the following list:

Rebuilt engines and installed machinery in three steam cutters; repaired main and auxiliary machinery and boilers on Coast Survey steamer *Gedney;* installed machinery in shop and put same in operation; overhauled and made needed alterations to main and auxiliary machinery of torpedo boat *Rowan;* made repairs to machinery of *Iowa;* made slight repairs to boilers of *Wisconsin;* general overhauling, aligning, and trueing up of main engines of transport *Egbert;* installed new feed pump, changed lead of piping, repaired cracks in boiler furnaces, and overhauled steam cutter; completed repairs to transport *Rosecrans* left undone by contractors, and made extensive repairs to boilers, uptakes, and smoke pipe; turned up propeller shaft and crank shaft for revenue-cutter *Bear*, and generally overhauled main engine; replaced broken rock shafts and eccentric rods on torpedo boat *Goldsborough*, and made other necessary repairs to her machinery.

The battle ship *Oregon* is also to be thoroughly overhauled at this place, and a large amount of boiler work is being done on the *Wisconsin*.

As this yard has the only dry dock on the Pacific coast which a battle ship can enter, it is of the greatest importance that shops and other facilities be at once furnished for so very important a station as this has become, and the Bureau can not too earnestly recommend that appropriations be at once made for this purpose. The shops should have about the same general arrangement as decided on for the Mare Island Yard, as this will be the best adapted to the space available.

The expenditures at this yard during the fiscal year amounted to..... $88,000.50

NAVAL STATION, PHILIPPINE ISLANDS.

The demands made on the steam-engineering shops at the naval station at Cavite have long greatly exceeded their capacity, though work has sometimes been carried on at night and on Sundays and holidays.

The result has been that a large amount of work has been done at the private yards in the neighborhood and at Hongkong at great delay and ruinous expense.

During the year repairs have been made to more than seventy naval vessels; many of these are of small size and, owing to the exigencies of the service, casualties and consequent repairs have been frequent.

A new boiler shed has been commenced on the wharf near the shears, and will be completed at the earliest opportunity; this will be used both for the building and repairing of gunboat boilers.

An engine was removed from the boiler shop and set up in the machine shop to replace one now out of service.

New blower and engine have been set up in the blacksmith shop and the forges repaired by fitting new hoods, water-jacketed tuyeres, etc.

Two of the boilers now in use are old and unreliable; to replace them one boiler has been purchased and is being set up, and another is now being built.

The machine shop space is being slightly increased by roofing over the space between the machine shop and smithery.

All shop engines exhaust into the atmosphere, which necessitates the use of salt water in the boilers. A surface condenser is now being erected to avoid this.

Work has been done for the other departments on shore, in addition to that done on ships, as follows:

Yards and docks.—Installed and made repairs to evaporating and distilling plants; set up tanks and made fittings for oil-storage plants; made repairs to floating derrick, yard lighters, tugs, launches, crematory, water tanks, piping, pumping station, yard boilers, and rolling stock; made fittings, castings, and forgings for various purposes.

Equipment.—Fitted and repaired shop engine; made shop fittings, castings, and forgings for various purposes; repaired hull and machinery of water boats and coal-hoisting machinery.

Ordnance.—Made bolts and mounts for Colt guns and fittings for machine shop.

Construction and repair.—Fitted up engine and boiler for shop; made fittings for boats, and forgings and castings for various purposes; pulleys and shafting for shops; scuttle butts; repairs to marine railway, dredges, cascos, scows, and lighters.

Medicine and surgery.—Made copper boilers for hospital use and drop screens for windows.

Marine Corps.—Repaired boilers, ranges, and ovens.

Repairs were also made to the distilling plant belonging to the Army.

From this brief synopsis it will be evident that the work done in this department of the station has been such as to require the full capacity of the shops and force, and that but little opportunity has offered to make repairs to and keep up the plant. This lack of opportunity for improvements has made it impossible to install more tools and make changes that are greatly needed and which would not only increase the facilities for work but also lessen its cost.

As it is believed that it is the intention of the Department to establish a naval station at Olongapo of size and capacity commensurate with the requirements of the fleet in these waters, the Bureau does not recommend any great enlargement of its facilities at Cavite, thinking it best to retain this latter station for ordinary repairs to the smaller vessels only.

At Olongapo, on the contrary, the Bureau considers it of vital importance that it be provided with a full assortment of shops and tools of size and number adequate to make any repair to the machinery of any vessel of the Navy, since the long distance from the nearest United States port, the delay, uncertainty, and great expense incurred by having work done by private firms in this part of the world makes it essential that for the efficiency of its fleet the Government possess a fully equipped, up-to-date building and repair yard in these islands.

The large amount of work that is required for the army transport service should also be performed in a Government yard, both as a matter of economy and to avoid delay, which is sometimes of even greater importance. This is another urgent reason for a complete outfit of shops and tools at Olongapo.

The amount expended under cognizance of this Bureau at the naval station at Cavite during the fiscal year was $265,698.47.

NAVAL STATION, SAN JUAN, P. R.

This Bureau has no facilities for repair work at this station, and all such under its cognizance has been done in private establishments.

There is an appropriation available for power tools which will not be expended until shops have been provided.

NAVAL STATION, HAWAII.

This Bureau has no shops at this station and all work under its cognizance has been done at the private establishments in Honolulu.

There is an appropriation of $25,000 available for power tools, but they will not be obtained until a place has been provided for them.

UNITED STATES NAVAL ACADEMY, ANNAPOLIS, MD.

The Bureau has included in its estimates the sum of $250,000 for the purpose of erecting a building to be used for an experiment station and testing laboratory at the Naval Academy, in the department of marine engineering and naval construction; this building to be two stories high, about 110 by 150 feet, and to conform in design and construction with the new buildings now being erected at the Naval Academy.

The sum of $150,000 has also been estimated for to equip this building with all the necessary appliances and apparatus as an experiment station and testing laboratory.

An establishment of this character will be of the greatest benefit to the service at large and afford means for securing much valuable information that can not be obtained in any other way. Besides this it will be of the highest value in training the cadets and instructing them in the method of conducting physical and mechanical tests and obtaining trustworthy and reliable results. It will also afford the means for advanced and original research in many serious engineering problems still undecided, serving the same useful purpose in steam engineering matters and questions that the experimental tank does which was lately erected at great cost in the Washington Navy-Yard, and is now in practical use, in the determination of best forms of ships' hulls.

The expense of an experiment station is almost entirely in its first cost, as its maintenance afterwards would be trifling, because nearly all

work in it would be performed by officers or others already in the service of the Government.

As it is certain that the benefits to be derived from such building and equipment will be out of all proportion to its cost, the Bureau can not too strongly urge its construction.

* * * * * * *

Very respectfully,

GEO. W. MELVILLE,
Engineer in Chief, U. S. N., Chief of Bureau.

The SECRETARY OF THE NAVY.

REPORT OF THE PAYMASTER-GENERAL OF THE NAVY, CHIEF OF THE BUREAU OF SUPPLIES AND ACCOUNTS.

NAVY DEPARTMENT,
BUREAU OF SUPPLIES AND ACCOUNTS,
Washington, D. C., October 15, 1901.

SIR: In compliance with the Department's order of August 13, 1901, I have the honor to present the report of the Paymaster-General of the Navy upon the duties and operations of the Bureau of Supplies and Accounts for the fiscal year ending June 30, 1901, with estimate of appropriations for the coming fiscal year and tabulated statements, as follows:

A.—General financial statement.

B.—Statement showing expenditures of money and material at shore stations and objects to which applied.

C.—Statement showing operations of the naval supply fund to June 30, 1901, and the account of the naval supply fund for the fiscal year.

D.—Statement showing the cost of maintenance of and improvements at navy-yards and stations.

E.—Statement showing the value of real estate and chattels and machinery plant at the several navy-yards and stations.

F.—Statement of payments through the Paymaster-General's office on contract, open-purchase, and open-contract vouchers.

G.—Statement showing the value of supplies on hand July 1, 1900, the receipts from purchase and other sources, and the expenditures during the year, and the balance on hand June 30, 1901.

H.—Statement of the value of stores received and expended on board ships in commission.

I.—Statement showing cost of maintaining ships in commission.

K.—Statement of public sales of Government property.

L.—Exhibit showing volume and distribution of business under the Bureau at the various home stations.

M.—Statement showing receipts and expenditures of provisions, contingent, clothing, and small stores, and balances on hand June 30, 1901. Also account of the clothing and small stores fund for the fiscal year.

N.—Schedule of proposals received.

The financial operations of the Bureau during the fiscal year herein exhibited cover all expenditures made from appropriations for the naval establishment, and show in principal items as follows:

Total credits, including balance from last fiscal year	$121,909,160.36
Total debits	73,436,710.12
Leaving a balance of appropriations on June 30, 1901, of	48,472,450.24
Amount drawn from the Treasury	60,129,932.80
Expenditures on account of construction, including labor, material, and purchase of yard craft, floating appliances, etc	10,644,217.87
Cost of repairs to ships and equipage at home and abroad	5,553,486.09

Cost of maintaining ships in commission, including pay of officers and men, together with the value of subsistence or commutation thereof and incidental expenses and material expended	$13,637,983.91
Expenditures on account of the Marine Corps	2,364,903.66
Cost to the Navy of the Light-House Establishment	84,199.12
of the Coast and Geodetic Survey	30,757.01
of the Fish Commission	65,058.98
for arming and equipping the naval militia of the several States, including material furnished	56,733.15
The deposits of savings by seamen during the year amount to	383,326.60
And the repayments	398,940.09
Total amount to the credit of the fund on June 30, 1901, was	545,252.96
Interest paid at 4 per cent per annum upon repayment amounted to	20,324.84

THE PAY CORPS.

While the resources of the Bureau have been found adequate to meet the demands made upon it, the personnel of the Pay Corps has been taxed to the utmost to provide for the increased enlisted force of the Navy and the Marine Corps, to fit out new ships, and to furnish those in commission with the supplies necessary to maintain them in a condition of efficiency. During the past year the officers of the Pay Corps of the Navy have been constantly employed, both afloat and ashore, in the discharge of the duties connected with the disbursement of all money appropriated for the naval establishment, the care and issue of Government property pertaining to the naval service, and other work incident to the management of the vast business of the Navy. Unusual responsibilities have at times rested on individual officers, the purchasing pay officer at New York alone having disbursed approximately $20,000,000 on 27,000 vouchers. But 3 officers of the Pay Corps were off duty on the 30th day of June, 1901—2 on sick leave and 1 (since detailed to duty) on waiting orders.

It became necessary during the year to relieve about 15 pay officers on duty in the Philippines, who had completed a three-years' cruise. These reliefs could be obtained only by detaching from shore stations in the United States pay officers whose services could ill be spared, in several instances involving the assignment of some officers to double duty, at a disadvantage to the work in hand. When the officers thus relieved had returned, it was found necessary in almost every instance to order them to duty immediately without the leave of absence which every officer should have after long service in tropical climates. The necessity for some reserve force of pay officers is evident, and it is believed that an increase in the number now allowed by law must be asked for in the near future.

THE NAVY RATION.

It has been evident for some years that the ration fixed by the law of July, 1861, was deficient in quantity and variety. This deficiency was manifested not in complaints by the enlisted men nor in official reports by officers, but in an effort to remedy the defects of the law by fixed monthly contributions from the individual members of berth-deck messes. Thus each mess raised a fund for buying fresh vegetables and fruits in their season, and various delicacies whenever a ship was in port. This measure, purely voluntary on the part of the men, was encouraged by the officers of cruising ships as affording a much-needed relief from the inelastic diet fixed by the law. It next became

evident, however, that this method involved great waste through lack of proper organization and management, and the conviction grew that better results could be had at no greater expense if the several berth-deck messes were organized as one general mess, with a common fund of contributed money, administered by an officer for the benefit of the whole. This led to the allowance of a commissary yeoman in a ship's complement for the purpose of properly administering the fund under the supervision of an officer; and the addition of this yeoman to the complement is the sole official recognition, with the exception of the provision in article 525 (5), United States Navy Regulations, of the system that has so grown up outside of the regulations. Being thus unauthorized and consequently unmilitary, there were inevitable defects in the results.

By way of dealing comprehensively with the matter, and with a view to retaining the good features while eliminating the bad, a board of seven officers was constituted by your order of 15th July, 1901, Capt. John J. Hunker, U. S. N., senior member, for considering and reporting upon the entire subject, with recommendations.

The report analyzes and thoroughly discusses the subject and recommends the adoption of a more liberal food allowance, to cost about 30 cents per man per diem, which is the present nominal and commutation value, and to contain everything necessary to support the health and well being of the men in every climate, with a plan for administration involving certain radical changes with regard to the personnel of the commissary and galley force afloat.

The board in its search for a satisfactory solution of the messing problem on board ship concludes that, as a measure of military organization, the pay officer should "act as commissary of the general mess, and, as such, should have direct authority, under the captain, over commissary stewards, cooks, bakers, and others at the galley." And in proposing regulations for carrying that measure into effect the following is submitted by the board:

Article 752, paragraph 1: The pay division shall consist of all pay officers attached to the ship, the paymaster's clerks, yeomen, and jacks of the dust, the commissary stewards, cooks, bakers, store men, and such other persons as may be assigned to it by the commanding officer.

Article 753, add: Paragraph 4. He shall act as commissary officer of the ship and have charge of the general mess and of the commissary steward, cooks, bakers, and others at the galley. His responsibility shall end with the delivery of the food to the mess men.

Paragraph 5. He shall pay particular attention to the proper financial conduct and judicious administration of the mess. Under his direction the commissary steward shall attend to the daily marketing, exercise supervision and control over the galley and mess storeroom, and perform such other duties as he may direct.

The pay division so proposed would be an important factor in the ship's military organization, and its constituent units, of course, could not belong to any other division at quarters without destroying both the efficiency of the mess organization and the responsibility of the pay officer therefor.

POWDER DIVISION DUTY.

This consideration leads to the logical sequence that the pay officer should have charge of the powder division under the ordnance officer, or of one section of it when divided, in which all the personnel of the mess organization should be stationed at quarters, with such others of

the crew as might be so assigned. This would require, of course, his full qualification for powder division duties.

By giving the pay officer this duty he could render efficient service in the military organization, and would release for other duty an officer now assigned to the powder division. This consideration should earnestly commend the idea at a time when the Navy's growth in ships is rapid, while its quota of officers is fixed. There were many instances in the civil and Spanish wars where pay officers were placed by their commanding officers in charge of the powder division, or a section thereof, rendering efficient and satisfactory service. It is believed that pay officers in general could qualify for this service, which is now performed by a line officer, and they should, if found qualified, be so detailed. This would make available for this duty about 70 pay officers on board ship, thereby releasing a corresponding number of line officers for gun-division duty. The report of the board has been approved by the Bureau of Navigation, and it is but pursuing its recommendations to their natural and necessary conclusion to urge that the Department prescribe the qualifications requisite for powder-division duty on the part of pay officers afloat; that they shall be required to take examinations after a definite period of time, and that such of them as are found qualified be assigned accordingly. In order that assistant paymasters, upon entering the service, shall have the requisite knowledge, it is further suggested that great benefit to the Navy would follow if the law were changed so that appointments to the Pay Corps would hereafter be made from graduates of the Naval Academy.

MARINE RATIONS

In my last report attention was called to the issue of the navy ration, or commutation thereof, to marines serving on shore in Guam and the Philippine Islands. The Auditor for the Navy Department has suspended all such payments for commuted rations against the accounts of the pay officers who made them. The issue of a navy ration or commutation to marines serving on shore in the island possessions and on foreign stations, when it is impracticable or the expense is found greater to supply them with the army ration, has since been authorized by Congress, but did not become effective until July 1, 1901. As soon as an itemized account of the checkages against the various pay officers can be obtained from the Auditor the Department will be requested to ask Congress to relieve these officers of the amounts suspended against them.

NAVAL-SUPPLY FUND.

Since the establishment of the naval-supply fund, in 1892, each year has shown increased benefits and advantages derived from its existence and a gain in the volume of business done under it.

The fund has continued to grow in favor and utility, and now operates under an appropriation of $2,500,000.

By purchasing large quantities of supplies at one time, after public advertisement, wide competition is invited, and the service is furnished with stores of an excellent and uniform quality at low cost.

The principal storehouse for naval-supply fund stores is at the navy-yard, New York, from which shipments are frequently made to other

yards and stations. A quantity of these supplies is also kept on hand at the naval station, Cavite, P. I., for issue to the ships of the Asiatic fleet. It is now intended to augment this stock by an early shipment of a large and varied list, after the receipt of which local purchases at high prices will become less and less as experience is gained. The military importance of this well-stocked storehouse can not be questioned, and it is owing mainly to the supply fund that such a comprehensive stock on a station remote from a general market can be maintained.

One of the far-reaching benefits of the fund has been the standardizing of specifications for articles used in the Navy. Before its establishment bureaus using the same article often had different specifications for it, thereby causing many misunderstandings with merchants dealing with the Navy. In connection with this subject the following occurs in the Report of the Secretary of the Navy for 1894:

> The Bureau of Supplies and Accounts has accordingly been charged with the duty of formulating specifications for standard articles which shall be uniform for the same article in all departments and at all stations. * * * It is safe to say that the Navy is now receiving better supplies, and at comparatively lower prices, than ever before.

This work is being carried on as rapidly as possible, and it is hoped that eventually a complete set of specifications for all commercial articles used in the Navy will have been issued, though the preparation of such specifications, requiring great care and painstaking inquiry, must necessarily be slow.

The work pertaining to the general storehouses of the Navy is complicated and made unduly tedious and expensive by the carrying of the whole stock of supplies under many distinct accounts and subaccounts. The greater portion of the daily business of a storehouse centers, however, around three of the main accounts, viz, (common) general stock, (special) general stock, and naval-supply fund stock. Article 1279 (1), United States Navy Regulations, explains the necessity for the two kinds of general stock. This regulation was a necessary outcome of the act of June 30, 1890, making all stores purchased for use of the Navy common stock for use for any purpose, "under such regulations as the Secretary may prescribe." This necessary separating of the general stock might well be called the most complicating and embarrassing feature in the general storekeeping system of the Navy, and its abandonment would simplify storekeeping, bookkeeping, and clerical work in *all* directions in the naval establishment, and would remove a cause of almost constant friction, of a more or less serious nature, over the use of stores by departments for whose use they were not originally purchased. Dissatisfaction and contention impair efficiency, no matter how strict and plain the regulations may be which govern the conduct of business.

I now submit a proposition for eliminating the (common) general stock and for causing a gradual and necessary increase (without further appropriation of money) in the naval supply fund:

At the close of each fiscal year let all serviceable general stock be transferred to naval-supply fund stock without reimbursement, with the following exceptions:

(*a*) Material purchased for specific purposes, of types not customarily carried in stock, and which is still needed for the purposes for which purchased.

(*b*) Certain articles of equipage and their technical appurtenances, and certain "supplies" (as distinct from "equipage") of a strictly naval or military character, that may be specially designated by the Secretary of the Navy.

(*c*) Stores of outfit set aside for ships out of commission, provided that, in case of ships whose date of commissioning has not been definitely fixed in the following fiscal year, such reservations do not include "supplies" (as distinct from "equipage") not classed under section (*b*).

(*d*) Stores condemned under approved surveys as unserviceable for regular general use but reserved for issue for special purposes.

(*e*) Fuel.

(*f*) Specially tested hull material for ship plates, shapes, rivets, and forgings; specially tested material for screw propellers, boilers, and engine forgings; and deck planking, plank stock, and special lumber for boat building.

(*g*) Material pertaining to the electrical outfit of vessels that, although not coming strictly under that covered by section (*b*), is of a noncommercial character, and which must, therefore, be specially manufactured for naval use.

In considering the above-outlined plan it is argued that with regard to annual appropriations the law provides that balances unobligated at the end of a fiscal year shall revert to the Treasury. Apply the same principle (with certain necessary exceptions) to the stores unused at the end of the year by transferring them to the naval supply fund, and the effects would be many and beneficial. The fund would find its necessary growth without direct appropriation; the administrators of the annual appropriations would exercise greater judgment and caution year by year; there would be no temptation, as under the present law, to draw supplies that are unsuitable or unnecessarily costly merely because they might be had without reimbursement; the entire storekeeping work would be simplified and facilitated, and, a most important consideration, the annual appropriations for the naval establishment would be applied as contemplated by law, to strictly legitimate uses in the year for which they were made. In the language of the Comptroller of the Treasury, quoted from a recent decision:

> Congress intends that each annual appropriation should bear the burdens of the particular year for which it was granted for the proper use of that year and no other.

The proposed change would be strictly in line with the principle so enunciated.

IMPROVEMENT IN GENERAL STOREHOUSE METHODS.

During the past year much has been accomplished in bringing under a uniform system the methods of performing the storekeeping, clerical, and bookkeeping work at the general storehouses of the different navy yards and stations. This task of reorganization has been placed in the hands of an experienced officer, Paymaster John A. Mudd, U. S. N. The results so far obtained are very satisfactory and emphasize the necessity for its undertaking. There is a vast amount of detail involved in the administration of the work of a general storehouse that can not be covered by the Navy Regulations. When the general storekeeper's system was instituted some years ago, the general conduct of the business was laid out with method and pre-

cision, but the details of the interior organization of the offices had to be left to future experience. No well thought out supervision could be given to this matter for some years by the Bureau, on account of the volume of business of the moment that required all attention. The result of this has been that each general storekeeper's office worked out its own internal system of performing work to arrive at the results called for under the general scope, as laid down in the Navy Regulations. These various resulting systems contained, naturally, both good and bad features; but the worst general feature was lack of uniformity in method.

With a uniform organization established at all navy yards and stations, this Bureau will be better able to control the work under its charge and to trace to its source error or delay in general storehouse business. Heretofore it has been difficult for an officer to carry out any useful, businesslike inspection of the general storehouses. Now the general inspector of the Pay Corps will be able thoroughly to grasp the administration of every storehouse and to report facts to the Bureau in such a comprehensive manner that a remedy may be applied at once where necessary. It can be seen how the hands of this official are strengthened by the work of reorganization, and how consequently his labors are made more valuable to the Department and to the service.

Within the scope of this reorganization has come the improvement of the storage facilities at the different yards. Those at Norfolk, Boston, Mare Island, and Puget Sound have been found to be entirely inadequate. The Bureau is giving careful consideration to this most important matter, and is meeting with hearty cooperation from the Bureau of Yards and Docks. It is to be hoped that the Department will approve all recommendations for the increase of storage facilities at the various yards, for none will be made at the present time that is not urgent.

COLD-STORAGE FACILITIES.

The naval station at Cavite, P. I., having been deprived of the services of the U. S. refrigerator ship *Culgoa*, the necessity for providing suitable cold-storage facilities ashore becomes urgent. Temporary arrangements have been made by the junior squadron commander of the Asiatic Station for the storage in the insular ice plant at Manila of meat brought by the *Glacier* and *Celtic*, during the absence of these vessels or while they are undergoing repairs. This arrangement, however, necessitates frequent transportation at considerable expense, with the risk of damage to the supplies by reason of exposure to the weather. A refrigerator or ice box should be erected immediately at the naval station, Cavite, where it would be accessible to the station, marine brigade, and vessels in the vicinity. The construction of a cold-storage lighter for the use of ships of the fleet is also recommended. Such a vessel should have a stowage capacity sufficient for three months' demands, and should be constructed with a view to its being hauled out on the ways when necessary. It would have the advantage of being movable, and in case of a transfer of the station or center of operations could be towed to the point desired.

COLLIER SERVICE.

During the past year contracts have been made between the Bureau of Navigation, acting under your direction, and several civilian merchant captains appointed under such contracts to the command of the various United States naval colliers. These contracts provided for certain preliminary payments in each case and subsequent reimbursements from time to time for money expended by the merchant captains to enable them to perform the duty assigned under the terms of their contracts; and as a measure of protection they were required to furnish bonds in a sum sufficient to indemnify the Government against pecuniary loss. Pursuant to these agreements instructions were issued authorizing certain pay officers to pay over to the respective captains the amounts required to enable them to meet necessary expenses. Because of a recent decision of the Comptroller of the Treasury, that under the law payment in advance of the performance of a contract is prohibited, the Auditor of the Navy Department has, in the settlement of these pay officers' accounts, suspended the amounts paid by them in furtherance of the various orders issued. In consequence, they are placed in a false position with regard to their disbursements, and some action should be taken to relieve them of responsibility in the premises.

I recommend, therefore, that Congress be asked to authorize the advances made for the purpose of meeting the expenses of the United States naval colliers commanded by merchant captains under contract with the Bureau of Navigation.

CADET STORE, UNITED STATES NAVAL ACADEMY.

Your attention is invited to the existing conditions in the cadet store at the United States Naval Academy, Annapolis, Md.

The capital necessary for conducting this business was advanced in 1867–68 from appropriation "Pay of the Navy," and has since been continued as a fund, being sustained by the proceeds of sales. Necessarily this capital, aggregating $24,500, is represented principally in the form of stock on hand and in outstanding accounts covering unsettled sales not yet reimbursed to the fund. From the Treasury point of view the pay officer on duty as cadet storekeeper has always on hand, and is responsible for, $24,500. In case of loss of stock through fire or other disaster he would still be accountable for the money value of the articles destroyed, and his bond would be held responsible unless relieved by act of Congress. Such an arrangement is not for the best interests of the Government, and it is besides manifestly unjust to the officers charged from time to time with this duty.

I recommend that Congress be asked to legalize the sum in question as a fund, thereby making the practice of more than thirty years conformable to law.

Pending such legislative action, improved business methods have been introduced which necessitate the keeping of a set of double-entry books, provide for a regular official inspection by the general inspector of the Pay Corps, and require the rendition of periodical reports by the cadet storekeeper to this Bureau.

This was deemed essential in order to safeguard the Government against possible loss of the funds used as the business capital of the cadet store.

PENALTIES ON CONTRACTS.

The system of penalties upon contractors for the nondelivery of supplies within the specified time limit has been in operation for about two years and has proved to be eminently satisfactory. Since the adoption of the penalty clause bidders have been very carefnl to scrutinize the time noted in the specifications; and, with a knowledge that delay beyond the time limit would involve a fine upon themselves, have ordinarily made deliveries to the entire satisfaction of the Bureau. It should be noted that the contracts provide that no penalties shall be imposed for delays caused by strikes, riots, fire, or other disaster, or delays on the part of transportation companies. It is believed that under this clause the widest latitude and the greatest amount of grace desirable for the interests of the Government are allowed, and the Bureau has consistently and continuously endeavored to prevent the remission of penalties for any cause whatsoever which could not be considered as coming within its limits. The most favorable construction to contractors has been given in interpreting it, and I am of opinion that under no circumstances whatever should penalties be remitted except for the causes specified. The Comptroller of the Treasury, in a decision dated August 19, 1900, ruled as follows:

* * * As time is usually an important element considered by bidders in fixing the price for a piece of work, it is fair to presume that bidders named a higher price for completing the work covered by this contract than would have been named had it been understood by them that a longer time would be granted the successful bidder. To give such successful bidder additional time after the award has been made, and without an adequate consideration, is an undue advantage to the successful bidder, if not an actual fraud upon the other bidders, and a damage to the United States, none the less real because the amount thereof is not easily ascertainable.

A wide experience with contractors shows the justice and wisdom of this opinion.

SECURITY FOR THE EXECUTION OF CONTRACTS.

The law now requires that all bids shall be accompanied by a written guaranty or by a certified check for the full amount of the proposal (act of May 25, 1896). In the event of award of contract, the bidder must either file a bond (sec. 3719, Rev. Stats.); or, if he has submitted a certified check with his proposal, in lieu of guaranty, that check may remain as security without bond. The amount of the bond, not fixed by law, varies according to the nature of the contract, generally ranging from 25 to 50 per cent of the amount involved. Ample security for its fulfillment is thus afforded, but dealers are frequently deterred from bidding by the trouble or expense of obtaining bond, or from giving a certified check instead, through reluctance to tie up cash to the full amount of the contract, perhaps for several months. In a tight money market this consideration might materially affect the bidding.

In the interest, therefore, both of the Government and of the business world, I urge two changes in the present law—that the act of May 25, 1896, be so modified as to authorize—

First. Acceptance of certified check, in lieu of guaranty and bond, for such proportion of amount of proposals and contracts as the Department may fix.

Second. An annual bond in such sum as the Department shall decide

in the several cases for the fulfillment of any and all undertakings that a contractor may enter into with the Bureau.

With these forms of security in addition to the bond for a single contract under the present law, the Government would be fully protected, while contractors would have a choice of methods. It is certainly good policy to allow as much latitude in business methods with contractors as is consistent with proper protection of the Government's interests.

TERMINATION ON LIABILITY FOR PAY OFFICERS' BONDS.

Under existing laws no provision is made for the termination of liability of a surety on a public bond. As pay officers of the Navy are required to give new bonds from time to time during terms of office, there is pressing need of legislation to relieve them of unusual hardship with regard to the payment of annual premiums, as it frequently happens that these officers are compelled or prefer to take out their bonds with corporate surety companies.

The act of March 2, 1895 (28 Stat., 800), has been construed by the Comptroller of the Treasury, in his decision on liability of sureties on bonds of officers, rendered June 17, 1899 (Comp. Dec., V. 91)—

> To cover the entire term of office, and if the officer is not appointed for any fixed term specified in the statute creating the office or in the commission appointing the officer, the liability continues during the whole period of service of the officer under said commission, whether short or long.

The law as now interpreted is thus manifestly unfair, not only to the sureties who serve on such bonds for the reason that they are never released from the liability originally incurred, but also to the officers who are required to qualify under such bonds.

Furthermore, the proviso of the same act—which reads:

> Hereafter every officer whose duty it is to take and approve official bonds shall cause all such bonds to be renewed every four years after their dates, but he may require such bonds to be renewed or strengthened oftener if he deems such action necessary—

has been also construed by the Comptroller of the Treasury in the same decision as follows:

> Under these provisos the Comptroller has held that such renewal bonds are cumulative and do not release from continuing liability the sureties on the original bond, notwithstanding the fact that new satisfactory bonds are forwarded as required by the provisions of this act where the renewal bond is given "during the same term of office."

Hence it appears that, as the new bonds do not operate to release the sureties on the first bonds, pay officers may be required to pay annual premiums on all the bonds furnished by corporate surety companies filed by them during their continuance in any one grade.

In the case of the Fidelity and Deposit Company of Maryland *v.* George W. Simpson, paymaster, United States Navy, for the recovery of premium on bond filed prior to the acceptance of a new bond by the Secretary of the Navy, upon which premium had also been paid, the supreme court of the District of Columbia rendered a decision in favor of the plaintiff. Paymaster Simpson is required, therefore, to pay annual premium on two bonds, each for the full amount required by law.

In view of the foregoing, I recommend that Congress be asked to pass a measure providing for the execution of new bonds and release of sureties similar to the bills H. R. 8500 and S. 3209, introduced during the last session of Congress.

PAYMASTERS' CLERKS.

Although Congress, in the naval appropriation act of June 7, 1900, included under the general head of "Pay of the Navy" the additional amount necessary for the increase in the salaries of certain paymasters' clerks employed at Norfolk and Mare Island, it was held, under a recent decision of the Comptroller of the Treasury, that these clerks must continue to receive the rates of pay provided for in section 1556, Revised Statutes, which is less than the pay of paymasters' clerks performing similar duty at the New York, League Island, Washington, and Boston stations. It therefore became necessary to prepare a measure amending the law fixing the annual salaries of paymasters' clerks, with a view to establishing a uniform rate of pay for those performing similar duty at the large stations, a draft of which has been submitted under the Department's instructions.

I recommend, therefore, that Congress be urged to consider this measure favorably.

With regard to the status of paymasters' clerks, as described in my last report, attention is invited to the recommendation contained in the annual report for 1900, which is renewed.

An additional hardship has been entailed upon many of them by the Department's recent order rerating naval vessels.

INSPECTION OF NAVY-YARD ACCOUNTS.

Attention is again invited to the necessity of providing for inspection of the cost-of-work accounts in the mechanical departments of navy-yards. With the steadily growing naval establishment, critical examination of this branch of work is very important as a measure of good administration; and the Bureau's recommendations on this subject, as presented for the last two years, are now renewed.

OFFICE ACCOMMODATION.

The space assigned in the State, War, and Navy department building is entirely inadequate to accommodate properly the office force employed to conduct the business of this Bureau. Unless additional apartments are secured, officers and clerks must continue to perform their duties in overcrowded rooms, under conditions not conducive to the best results, and often to the detriment of their health and comfort.

Very respectfully,

A. S. KENNY,
Paymaster-General, U. S. N.

The SECRETARY OF THE NAVY.

REPORT OF THE SURGEON-GENERAL, U. S. NAVY.

DEPARTMENT OF THE NAVY,
BUREAU OF MEDICINE AND SURGERY,
Washington, D. C., October 1, 1901.

SIR: In obedience to instructions contained in Department's letter of August 13, 1901, I have the honor to report the operations of this Bureau for the past year, accompanied by a set of annual estimates for the fiscal year ending June 30, 1903, and a statistical report showing the health of the Navy for the year 1900. The report embraces a statement of the condition of the naval hospital fund, the naval medical establishment, and other matters of interest pertaining to the duties of the Bureau of Medicine and Surgery.

A large proportion of the naval force still remains employed about the Philippines. This force has been notably free from epidemic diseases, and, with the exception of Cavite fever, the diseases with which patients have been admitted to the Cavite hospital have been those that would have occurred in any southern climate.

In view of the fact that the increase of work at the Cavite navy-yard has necessitated the use of buildings adjacent to the hospital for construction and engineering purposes, and the noise occasioned by the work in the buildings has been materially prejudicial to the welfare of the sick in the hospital, the Bureau proposes to transfer the hospital to another location. The present location has also proved an unhealthful one, as many of the patients admitted with other diseases have been affected by a low grade of fever which appears to be local in its origin.

The commandant of the naval force on the station has forwarded a report earnestly recommending the transfer of the hospital to Canacao and utilizing and improving the buildings partly erected there by the Spanish forces for use as a naval hospital. A request for an appropriation of $50,000 will be submitted for the accomplishment of this transfer and improvement.

The addition to the naval hospital at Yokohama is nearly completed, and it will probably be ready for occupancy by November 1. The hospital will then be ready to receive and care for all the patients it will probably be required to accommodate.

The reports from Guam indicate that the inhabitants of the island are proceeding with the establishment of a civil hospital, showing a desire to conform themselves to the customs of other communities. Typhoid fever on the island has almost disappeared, in consequence of an improvement in the water supply.

A dispensary has been opened at Pago Pago, where the natives obtain such medicines and treatment as they require.

The sick quarters at San Juan, Porto Rico, have had very few occupants during the past year.

Very few cases of disease have occurred among the naval force remaining in Havana.

The improvements made at the naval hospital, Chelsea, Mass., have been practically completed, and that hospital is now modern in its equipment.

The building of the addition to the naval hospital at Newport, R. I., is progressing well, and it will probably be ready for occupancy by the end of the present year.

The Bureau recently found itself compelled to bring to the attention of the Department the insanitary condition of the receiving ship *Vermont* at New York, and to recommend that its use as a receiving ship be immediately discontinued. Frequent reports had been received from the medical officers of the *Vermont* and from the medical officer in charge of the naval hospital at New York, to which place patients from the *Vermont* were sent, as to the nature of the diseases occurring on board due to local influences, and the final occurrence of cases of cerebro-spinal meningitis manifested the necessity of the immediate discontinuance of the *Vermont* as an abiding place for men. The ship is so old and contains so much saturated and decayed wood that no amount of fumigation or disinfection would have rendered her again habitable. If the vessel is ever again used as a receiving ship she must be thoroughly overhauled, all of the decayed wood removed, and the ship thoroughly disinfected. The Department very wisely substituted a steel vessel for the *Vermont*, and the men will now have a dwelling place that can be kept clean and sanitary. The *Columbia* is not an ideal receiving ship, and was never so intended, but it was the best that could be done in an emergency.

It will not be long before the other wooden receiving ships will be in the same condition as the *Vermont*, and the traditions of the Navy for being forehanded will not be maintained if early steps are not taken either to prepare steel ships for receiving ships or, still better, to build barracks on shore that will afford better accommodations for recruits than would be possible on a ship. The present receiving ships are merely floating houses, having neither masts nor sails for exercise, and a gun platform on shore would be no more rigid than one on a vessel whose bottom rests in mud.

The Hospital Corps maintains its standard of efficiency, and reports are constantly being received from medical officers indicating the marked improvement in nursing service since the establishment of the corps.

The passage by the last Congress of the act giving assistant surgeons in the Navy the same rank as assistant surgeons in the Army has proved a great boon to the corps. A very desirable class of young medical men are now seeking admission, and the number of vacancies has been reduced from seventeen at last report to four, and it is probable that these will soon be filled.

NAVAL HOSPITAL FUND.

The condition of this fund is as follows:

Balance on hand July 1, 1900	$177,999.63
Transferred to the credit since July 1, 1900	140,094.34
Credit by appropriation for fiscal year 1901	40,000.00
Total	358,093.97
Expended since July 1, 1900	177,296.81
Balance on hand June 30, 1901	180,797.16

ESTIMATES.

In addition to the sums annually appropriated by Congress, an estimate has been submitted for the following work:

Naval hospital, Canacao, P. I.—"For repairs and improvements in

fitting up old buildings and building new, building wharf, roads, and preparing grounds, and establishing a naval hospital at Canacao, Philippine Islands, to take the place of the present temporary hospital at Cavite, and for the transfer of public property from the old buildings to the new, to be immediately available, fifty thousand dollars."

The temporary hospital established in one of the buildings of the navy-yard at Cavite is now so surrounded by buildings in which work is carried on that it is no longer suitable for the care of sick on account of the noise. The building is also very much out of repair and is almost uninhabitable. Its location is unhealthful. It is proposed to adapt the buildings at Canacao intended by the Spanish Government for a naval hospital for use as a Naval Hospital, adding to and improving them.

GENERAL REPAIRS AT NAVAL HOSPITALS.

Naval hospital, Widows Island, Maine.—Only such repairs have been made during the year as were necessary for the preservation of the building, and all such work has been of a very minor character. This hospital, constructed in 1887, at a time when it was considered probable, in view of the large naval force in the neighborhood of the Isthmus of Panama, that a refuge would be required for infected vessels, has never been employed for any purpose. Repairs are made as may be necessary to preserve the building and grounds until they may be satisfactorily disposed of by the Government.

Naval hospital, Portsmouth, N. H.—The improvements and repairs at this hospital during the year have been for the most part of a minor character. The improvement most worthy of note has been a change in the lighting system. Until recently the building was lighted by gas manufactured on the premises, but as during the year it became feasible to connect with the electric-light system of the yard the hospital has been wired and is now well equipped with electric lamps distributed to all parts of the building. The following additional changes were made: The number of fire extinguishers was increased; copper flashings around cupola windows extended; refrigerator relined and furnished with new shelves; furnaces, boiler, hot-water tank, and water-closets repaired; radiators and pipes bronzed, and floors varnished and polished. A new bookcase has been supplied for the men's library, and apparatus has been furnished for generating formaldehyde for disinfecting wards and clothing. In the grounds the driveways have been repaired with broken granite, and the fences painted. The new dry dock, together with its buildings, coal sheds, and other additions to the yard equipment are rapidly, on account of their nearness, making the location of this hospital undesirable.

Naval hospital, Chelsea, Mass.—Extensive changes have been made at this hospital during the year as special provision was made for its renovation and enlargement in the appropriations for the naval service for the fiscal year ending June 30, 1900. In addition to these changes, which will be designated elsewhere, the following improvements and repairs were made: New fly screens have been provided for all windows and doors of main building and annex; furnaces of two steam boilers have been relined, and repairs have been made to laundry machinery, gas and electric-light fixtures, roof of main building, and plumbing. The floor of the ambulance stable has been cemented and an iron sewer drain laid, and the ambulance has been supplied with

rubber tires and renovated. A new coal wagon has been purchased for fire room, and repairs have been made to harness, floors of stalls, and to plank walks. The equipment of the hospital has been improved in kitchen and tableware, reclining chairs, rubber-tired casters for beds, remaking mattresses and pillows, and in repairs to surgical instruments and appliances. Steam-heating coils were put in for two water sterilizers in operating room and connection made with boiler room. A new focus tube for the X-ray outfit was supplied, and also additional bacteriological and microscopical apparatus. Additional means were also provided for utilizing formaldehyde in disinfection.

In the grounds four guns were planted in connection with the flagstaff, new lower wire rigging rove, and new halyards and flags supplied. Additional hotbeds were constructed and some grading was done and grass seed planted. In the cemetery wooden and iron crosses have been replaced by marble headstones, so that now that part of the grounds presents a very satisfactory appearance, as the fence is new and many trees and shrubs have been planted and much grading and sodding done.

Naval hospital, Newport, R. I.—The accommodations provided by the main building have been insufficient during the year to meet the requirements of the station. It has therefore been necessary to utilize the detached building intended for contagious diseases in the treatment of general cases. This has necessitated the employment of Ducker pavilions for cases requiring segregation. The conditions have therefore been such as to make general repairs impracticable. As an addition to the main building is now under construction, facilities will soon be afforded for work on wards and rooms, which, though the hospital is comparatively new, require more or less constant care to retain them in serviceable condition. During the year many minor repairs have been made to the plastering, which tends to crack and become insecure in all parts of the building, and the main sewer pipes have been renewed. The system of drains and sewers is very unsatisfactory, and in connection with the new work now in progress extensive changes will be made. New grates have been supplied for range, heating apparatus, and disinfecting plant, and two filters have been installed. A number of mattresses have been remade, and the equipment of the hospital has been greatly increased in beds and bedding, owing to the necessity of providing new accommodations for the contagious cases. A formaldehyde generator has been furnished, and the X-ray apparatus supplied with new tubes and thoroughly repaired.

During the year 1900, 23 cases of pneumonia were treated, with 2 deaths, and 13 cases of typhoid fever, with a fatal result in 1 case. In the previous year 44 cases of pneumonia gave 8 deaths, and 49 cases of typhoid fever 2 deaths.

Naval hospital, New York, N. Y.—The following improvements and repairs have been made to this hospital during the year: The old cobblestones were removed from the roadway to the laboratory house, the curbing reset, and vitrified brick laid; additional hydrants placed, connections made for fire purposes and 750 feet of 2½-inch rubber-lined cotton hose supplied; 2 unserviceable locomotive boilers were removed and 2 horizontal return tubular boilers substituted. The installation of these new boilers and the work of making all the connections were done under the direction and supervision of the Bureau of Steam Engineering, $5,000 having been appropriated by Congress for this

purpose. In making connections with the buildings the brick underground conduit was rebuilt, old leads replaced by extra heavy pipe, and asbestus sectional covering provided. A 4-inch Jenkins valve was placed at the boilers and a 2-inch valve inside the laboratory building. Changes made during the year in the hospital building consisted in repairing, cleaning and repainting roof, skylight, and ventilators; placing leaders and gutters in good condition; substituting 1-inch brass pressure pipe, supplied with valve and asbestus covering, for galvanized-iron hot-water pipe from kitchen; waxing and polishing floors of wards, and painting mess hall, some of the corridors and passages, and many rooms. Small repairs were made to ceilings in north corridor and basement, and to pipes of annex, and improvements were made in the residence of the medical director.

A room adjoining the operating room was fitted as a sterilizing room. The wooden floor was removed and tiles laid in cement substituted. The sterilizers were removed from the operating room and steam connections made by nickel-plated brass pipe, fitted with valves.

One hundred and fifty-six operations were performed during the year, including 22 for the radical cure of hernia, 3 for varicocele, 6 appendectomies, 1 thigh amputation, and several plastic operations.

Naval hospital, Philadelphia, Pa.—The improvements and repairs at this hospital were more extensive than during the previous year. In the operating room the wooden floor was removed and tiles laid in cement substituted, while vitrified tiles were placed around the walls to a height of 6 feet. The plastering of one wall was entirely removed, walls covered with white porcelain-enamel paint, and new lavatory and sink installed. The plumbing in the lavatories, bathrooms, and closets was repaired and renewed where necessary, and granolithic pavement laid in place of wooden floors. Repairs were made to electric-lighting system, roof, boilers, and hot and cold water pipes, some of the latter being replaced on account of incrustations. This condition is found even in pipes that have been used for only ten years, and in both cold and hot water pipes, whether placed vertically or horizontally.

Naval hospital, Washington, D. C.—Only minor improvements and repairs have been made to the grounds and buildings during the past year. New iron fence was placed at entrance and on terrace, porch floor and timbers were renewed, water main repaired and partly replaced, and two water filters installed. The main staircase was painted and repairs made to plumbing, plastering in basement hall and bathrooms, gas fixtures, and range. The X-ray apparatus was put in good order, a light stretcher was supplied for use in the ambulance, and a number of mattresses and pillows were cleaned and remade.

The cases of epidemic diseases admitted during the year included 21 of measles, 4 of rubella, and 4 of scabies. There were 49 cases of malarial fever received from the Washington yard and Marine headquarters.

Naval hospital, Norfolk, Va.—During the past year the following improvements and repairs were made at this hospital: The laundry has been supplied with new washing machine, mangle, and porcelain tubs; in the kitchen a brick floor has been laid in cement and a new range installed; the verandas and a number of rooms have been painted and floors polished; electric enunciator and bell system installed, and dispensary furnished with new shelf bottles and sink. Three rooms for sick officers have been completely refurnished and 50 aseptic ward-

tables supplied. The work of shelling the roads has continued and a number of oak trees have been planted with a view of providing for the loss in the pine grove in the rear of the hospital where many trees die now each year.

The bridge connecting the hospital grounds with the city has been closed, as owing to decay it is no longer considered safe. It is hoped that arrangements may be made for rebuilding as it furnishes the most convenient way of entering and leaving the grounds on foot. The marsh above the bridge is being gradually filled, and when the work has been completed and grass sown the appearance of the grounds at this entrance will be greatly improved. A crib wharf beginning at the end of the bridge is now building.

Naval hospital, Port Royal, S. C.—Only minor repairs were made at this hospital during the year. The verandas of the different buildings have been connected in order to facilitate communication in wet weather, and repairs have been made to water-closets. Should the station be utilized for the training of landsmen when a navy-yard has been established at Charleston, the importance of this hospital would be greatly increased. Under such circumstances it is probable that additional accommodations would ultimately be required. During 1900 the number of patients was only 32, of whom 17 were received from naval vessels visiting the station.

Naval hospital, Pensacola, Fla.—Only minor repairs have been made at this hospital during the year. The work of clearing the grounds has continued, and the north and south entrances have been provided with low picket gates. Within the building grates and fire boxes have been renewed.

Owing to the presence of the fleet at Pensacola during a part of the winter the work of this hospital was much greater than usual, and the value of the more extensive improvements and repairs of the previous year was realized.

Naval hospital, Mare Island, Cal.—This hospital, which was completed and occupied in April, 1900, and of which a description was given in the report of last year, was supplied in June, 1900, with a complete outfit of laundry machinery of most approved design. The new boiler house, boilers, and equipment, for which a special appropriation of $10,000 was made by Congress, have now been completed. This work was undertaken, in the absence of bids, by the civil engineer of the yard, acting with the approval of the Bureau of Yards and Docks, and has been completed in a very satisfactory manner. In the hospital fire escapes have been provided, a new water meter has been installed, a large new range placed in the kitchen, and a refrigerator of much greater capacity than the one formerly used supplied. Enameled iron lockers have been placed in the wards, portable bath tubs furnished, and the appliances in the operating room, including the supply of surgical instruments, put in good condition. The building has been practically refurnished, and rubber matting has been laid in corridors and wards and on stairs. In the general office a large cabinet for records, blank forms, and stationery has been placed. The grounds have been kept in good condition, fences have been whitewashed, new lawns made in front of the building, and, in the cemetery, grass cut, trees trimmed, and fence of inclosure painted.

Considerable medical and surgical work has been done at this hospital since it was newly constructed, as patients are received not only

from the yard and the fleet on the Pacific coast, but also from the Asiatic station, a certain number of the sick and injured from the force in the East being ultimately transferred home. As the last factor is becoming of greater importance, it is probable that if that force is maintained at its present strength additional accommodations will have to be provided at this hospital, especially as owing to more or less infrequent communication a considerable number of patients from the Asiatic station is received at a time.

A number of cases of mumps and measles were also treated during the year, the detached building constructed for administrative purposes after the destruction of the former hospital by earthquake having been employed for that purpose.

Naval hospital, Sitka, Alaska.—This hospital is not a separate building, but consists simply of a few rooms on the third floor of an old storehouse which, owing to the decay of timbers, is practically beyond repair. The marine guard at this post was somewhat increased during the year, and if the station is to be permanently occupied a small building to be used as sick quarters should be erected on the Government reservation.

Greater comfort and convenience were secured in the present quarters by taking in an additional room during the year and converting it into a kitchen, the room formerly used for that purpose being now utilized as a dining room. Minor repairs have also been made and woodwork painted.

During the early part of the present year there was an epidemic of smallpox among the Indians at Sitka. No case of the disease appeared on the station.

Naval hospital, Yokohama, Japan.—The hospital has sustained no serious injury during the past year from storms and earthquakes, but minor repairs to woodwork and plastering have been frequently necessary from those causes. The buildings are in a fair state of preservation, but the floor of the lower ward is showing wear and giving evidence of weakened supports. Opportunity has not been afforded during the year for more than minor repairs, as, owing to the number of patients received from the Philippines and as a result of the disturbances in China, the wards and rooms were constantly occupied, at times cases in excess of the capacity of the hospital having been provided for in the Yokohama general hospital and elsewhere. The building of the addition authorized by the Department during the year 1900, and now practically completed, will, by providing additional quarters, facilitate improvements and repairs in the wards and rooms now in use. The verandas were repaired and painted, the mess hall papered, additional bedding supplied, and a number of articles furnished for operating room.

While the supply of water has been ample, rain water stored in iron tanks being used for drinking and cooking purposes and well water for bathing and washing, the absence of running water has been regarded as a great defect in a building used for hospital purposes. It is reported, however, that the city water supply will soon be extended to the bluff, but should that prospect not be realized the situation will be greatly relieved by the small tanks placed in the attic of the new building and supplied by a steam pump. In this connection a contract has been let for a deep well and two 5,000-gallon tanks. This supply will be supplemented by the reserve cistern, having a

capacity of 40 tons, and which has always been kept full for fire purposes, pressure having heretofore been obtained by a pump worked by hand.

The work of this hospital during the past year has been of great importance. Since the acquisition of the Philippine Islands there has been a large force of the Navy and Marine Corps on the station subject to a tropical climate. This force has not only been attached to ships but also located on shore, the number of marine posts having been steadily increased. The importance and value of Yokohama as a sanatorium was soon realized and advantage taken of the United States naval hospital at that place. The necessity for the enlargement of this hospital soon became evident, and plans were being prepared when the Chinese disturbances occurred. Those disturbances caused the Department to immediately authorize the building of an addition. The work, a description of which is found elsewhere in this report, was begun so soon as the contract could be awarded and has now been nearly completed, the detached building, in poor condition and sometimes used as a ward for contagious cases, having been removed to provide a site.

The hospital is admirably situated on a bluff free from malarial influences, and the climate is delightful. Though July and August have a mean temperature of 80° F., with a minimum of 70° F., January, the coldest month, has a mean of 38° and a minimum of 30°. The dewpoint in January is 30 and in July and August is 70. The annual rainfall is 50 inches. Since the proper sanitary laws and regulations have been made and enforced in the city epidemic disease has become very infrequent.

Naval hospital, Cavite, P. I.—This hospital, established in 1899, simply represents the quarters at hand that could be made available for the sick at the time the station became the property of the United States. The work of preparing and fitting these quarters for the reception of the sick was done without delay, and the result has contributed very greatly to the efficiency of the fleet and station. Yet it is recognized that the present arrangement leaves very much to be desired, apart from the condition of the building incident to age. One of the greatest objections is the location of the hospital within the inclosure of the station. This objection is not only based upon the noise incident to the work of the station, but also upon the unhealthfulness of the entire locality—a condition which seems to obtain also in Cavite proper and, probably, over much of the peninsula. Another great objection to the present arrangement for the care of the sick is the lack of room, both for the sick and administrative purposes, and the consequent inability to properly separate cases. While this has led to an extension of the facilities at the dispensary of the station, thus limiting the transfers to hospital of cases occurring in the complement of the station itself, the space at the hospital is still too contracted for the best care of the sick received from the fleet, the various marine posts, and also from the station. In relation to the subject there is also the question of establishing a naval station elsewhere in the Philippines, probably at Olongapo, and of the extent which the medical and surgical requirements of the present station would be reduced in that event. In the meantime a change in the present location of the hospital is under consideration, and it has been recommended that Congress be asked to make an appropriation with that end in view.

The difficulties connected with a suitable site are great and may not be entirely overcome. Several sites have been under consideration, including most prominently that of the old Spanish naval hospital at Canacao, where there are certain buildings that could be utilized in connection with new construction. Plans and estimates of the probable cost of the work that would be necessary to make the latter place suitable for use as a naval hospital are now being prepared. It is located about 2 miles from the station, on the shore of Canacao Bay and beyond the village of San Roque. The grounds are level, but not very much above tide water, and they contain a number of fine shade trees. A wooden pier extends about 120 feet to water sufficiently deep for ships' boats. The buildings now consist of one brick pavilion about 30 feet wide by 75 feet long, and a chapel. The pavilion is surrounded by a broad veranda and is covered by a corrugated galvanized-iron roof in fair condition. With repairs and not a small amount of new construction the place could be put in condition for use. This work will be undertaken apart from the location of a hospital near the new naval station and is considered to be necessitated by the lapse of time before that station could be established, and also by the fact that in any event a force of some size would have to be maintained in the present locality.

During the year 1900 there were treated in this hospital 357 cases, including 24 remaining from the previous year. Of this number there were received 23 cases of dysentery, 27 of typhoid fever, 16 of malarial diseases, 4 of pneumonia, 15 of articular rheumatism, 12 of pulmonary tuberculosis, 4 of anæmia, 5 of simple continued fever, 4 of appendicitis, 3 of diarrheal troubles, 7 of hemorrhoids, 4 of icterus, 3 of angina pectoris, 7 of palpitation of heart, 4 of lymphadenitis, 6 of bronchitis, 3 of pleurisy, 5 of myalgia, 8 of abscess, 3 of eczema, 84 of venereal and genito-urinary diseases (including 3 of nephritis), 3 of fracture, and 7 of gunshot wounds. Ten cases of dengue were also returned, but there were additional cases that occurred among those admitted for other causes. There were 12 deaths, 3 due to typhoid fever, 2 to remittent fever, and 1 each to dysentery, suppurative hepatitis, tuberculosis, cellulitis, nephritis, syphilis, and gunshot wound. The total number of sick days was 10,523. One hundred and seventy-three cases were discharged to duty, 125 transferred to other naval hospitals, 21 invalided from service, and 26 remained at the end of the year.

Few changes other than minor repairs were made in the building during the year. Owing to the lack of available space it is not practicable to make other than very small additions. An extension was built in the contracted space back of the hospital for use as a laundry. Formerly a room on the ground floor of the building was utilized for that purpose. The entire inside of hospital was painted, gratings were placed in lower entrance hall, screens were supplied for all windows, improvements were made in water-closets and bathrooms, a new sink was installed in dispensary, and the bag room was fitted with shelves and racks.

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UNITED STATES NAVAL MUSEUM OF HYGIENE.

During the year the library was increased by the addition of 73 volumes of bound books, and the usual number of medical and scientific journals and health reports was received and arranged for convenient reference.

Three hundred and thirty-nine chemical, bacteriological, and microscopical examinations were made, chiefly for clinical purposes, and also a number of experimental and analytical observations on formaldehyde generators, water sterilizers, and vaccine. Various cultures have been prepared from time to time and sent as required to naval hospitals and stations, for diagnostic purposes, and a number of microscopical outfits has been issued on requisitions from ships and stations.

New assay apparatus has been installed and improvements made in building and grounds. A corrugated-iron ceiling was placed in the assay room and in one of the rooms on the first floor. A portion of the wall on the east side of the grounds was rebuilt, drains cleaned, and grass seed sown where required.

In accordance with an act of Congress approved March 3, 1901, 5 acres of the western part of the reservation were transferred by the Navy Department to the Treasury Department to be used by the Marine-Hospital Service for the erection of an experimental laboratory.

An exhibit was prepared and forwarded to the Pan-American Exposition. In this connection much photographic work was done at the museum and the photographs arranged in albums as a part of the exhibit. At the exposition there were also placed, as a part of the naval exhibit in the Government building, a model of the ambulance ship *Solace*, employed with the fleet in Cuban waters during the Spanish-American war, and the sick bay and dispensary of a battle ship fully equipped. These were carefully prepared by the naval constructor of the Boston yard and have been a prominent and very interesting part of the exhibit.

In conclusion, attention is called to the health of the Navy and Marine Corps during the year 1900. The conditions of that period were not similar to those of the previous year owing to the disturbances in China, which caused an increase in the number of cases of wounds and of deaths from that cause, and placed a considerable force under the influences of insanitary surroundings. During the year additional shore stations were occupied in the Tropics and the force on the Asiatic station, afloat and ashore, was greatly increased. However, in the accompanying statistical report, which includes an appendix relating to the disturbances in China, it is apparent that the total number of cases under treatment, per 1,000 of strength, was only slightly greater during the year 1900 than the average for the five preceding years and that the death rate from disease was not much in excess of the average for the same period. Owing to 40 deaths from gunshot wounds and 30 from drowning the mortality rate from injuries was greatly increased.

Very respectfully,

W. K. Van Reypen,
Surgeon-General United States Navy.

The Secretary of the Navy.

REPORT OF THE COMMANDANT OF UNITED STATES MARINE CORPS.

HEADQUARTERS U. S. MARINE CORPS,
Washington, D. C., October 1, 1901.

SIR: I have the honor to submit the following report of the condition and services of the United States Marine Corps for the past year:

Since the date of my last report I have made a personal inspection of the marine barracks at the navy-yards, Portsmouth, N. H., Boston, Mass., League Island, Pa., Norfolk, Va., Pensacola, Fla., the Naval Training Station, Newport, R. I., the Naval Academy, Annapolis, Md., the naval station, Port Royal, S. C., and the manufacturing depot and assistant quartermaster's office, Philadelphia, Pa.

Certain improvements are being made at the several stations, as mentioned below:

NEW YORK, N. Y.

The $15,000 appropriated by Congress last year for additions to the marine barracks, navy-yard, New York, N. Y., has permitted the addition of one story to the main building of the barracks, thus providing much needed accommodations for the men.

Congress also appropriated $28,000, as recommended in my last annual report, for necessary repairs and improvements at the barracks, including the installation of steam heat, the building of a boiler house and lavatory, and the adding of a third story to the wings of the enlisted men's quarters. Contracts for this work have been made, and the work has been commenced and will be carried on as fast as possible.

In addition to the above, I submitted a deficiency estimate for $17,500, under the head of "Repair of barracks," for improvements and repairs to buildings, sewerage, prison cells, lights, etc., at the marine barracks, navy-yard, New York, N. Y. This estimate was transmitted to Congress by the Department and the amount was appropriated. Under this appropriation the work of improvement has been commenced on the guardhouse, to which two wings have been added, providing fourteen modern cells, also adding a dormitory to the quarters of the guard, and offices for the commanding officer and officer of the day; a summary court-martial room and a schoolroom, as well as increased space for storing official records. In addition to these improvements steam heat has been installed in the commanding officer's house, and the house has been thoroughly repaired and is now in excellent condition. In the men's quarters a new bake oven costing $500, has been installed which will bake bread sufficient for a command of 500 men. An orderly room has been established and furnished completely for the use of the noncommissioned officers. After these several repairs are finished the New York barracks will be in a thorough state of repair and the enlisted men will be as comfortable as it is possible to make them.

BOSTON, MASS.

Considering their great age the barracks are in an excellent state of repair, though barely large enough to accommodate the number of men now required for duty at this navy-yard.

During the year the interior of the barracks has been painted throughout; new floors laid in the rooms that required them; the old heating system overhauled and put in thorough repair, and a new boiler installed which will double the capacity of the plant, formerly too small to meet the requirements of the rigorous climate.

The bakery has been enlarged, and a new brick oven of the latest design, with a capacity of 350 loaves at each baking, installed.

The storerooms have been enlarged and refitted, and many minor repairs made throughout the barracks.

Work is now in progress upon the parade ground and approaches. The old brick walks are to be replaced with granolithic pavements, and the surface of the parade ground is to be improved.

The interior of the officer's quarters have all been painted or papered during the last year and are in good condition.

Upon the completion of the work now laid out at Boston that navy-yard will rank among the most important in the country, and a larger force of marines will be required there. The large increase in the size of the naval prison will require a still further increase in the marine force.

To accommodate this increase more barrack facilities must be provided in the near future, either by radical changes in the present structure or building a new barracks.

From reports just received by the quartermaster of the Marine Corps it appears that extensive repairs are needed to put the water-closets at the marine barracks, Boston, in a thoroughly sanitary condition. The floor of the room in which the closets are located should be concreted, and modern urinals, etc., and an improved system of ventilating and lighting should be installed. As it was too late when these reports were received to incorporate the items in the regular estimates I will later direct the quartermaster to submit a deficiency estimate covering these repairs, which are necessary to the health and comfort of the men, as I am of the opinion that they should be made at the earliest practicable date.

THE NAVAL PRISON.

The naval prison, which was built to accommodate 60 prisoners, has been crowded to its utmost, due to the increase in the Navy; but in spite of this the administration has been such that the prison has been kept neat, clean, and healthful throughout.

When the repairs now in progress are completed cells for 150 prisoners will be provided, with an extreme capacity of 300 in case of emergency.

Plans have been completed to still further increase the capacity of the prison by an addition of 150 cells, which would make the normal capacity 300, and provide for 600 in case of emergency.

This will ultimately necessitate a great increase in the strength of this post, to furnish the large daily guards at the prison, and in charge of the prisoners performing extra police duty.

PORTSMOUTH, N. H.

In my last annual report reference was made to the appropriation provided by Congress for raising the roof of the marine barracks, navy yard, Portsmouth, N. H., one story. This work has been completed

during the present year, and the additional quarters are now occupied by the men. The work was well done, and makes a great improvement in the barracks, the men being much more comfortable than formerly.

In my estimates for the next fiscal year I have asked for $12,000 for further improvements, at the Portsmouth station to provide very much needed additional room for officers as well as additional accommodations for the enlisted men. It is intended to add the additional room for officers at the left wing of the barracks, and to make an addition to the rear wing of the barracks, to provide the required living space for the men. This arrangement will also permit the installation in the barracks building of plumbing fixtures which are now located in an outbuilding, thus admitting of the use of the latter building as an amusement room for the men, which is an urgent necessity at the post.

LEAGUE ISLAND, PA.

The act of Congress approved June 7, 1900, made an appropriation of $100,000 for the construction of a modern fireproof marine barracks at the navy-yard, League Island, Pa. As mentioned in my report of last year, the plans and specifications for the new barracks were prepared by Mr. Henry Ives Cobb, architect. The two lowest bids received were irregular, and the next lowest bid, that of Mr. Charles McCaul, of Philadelphia, Pa., was accepted, as investigation showed that he was a regular and responsible contractor of wide experience in such matters. The contract was awarded as soon as possible, and the work progressed so satisfatorily that the building was completed on August 1, 1901, with the exception of a few minor details, and the command, which had, prior to this time, been quartered on board the U. S. S. *Yankee*, moved into the new barracks on the date mentioned. The new barracks is a very handsome building, well planned and well built; will accommodate 350 men, and will make a comfortable home for the enlisted men at the station. Some work remains to be done on the parade ground, such as filling in, grading, sowing grass, etc., which will be completed in the near future.

Second Lieut. Frank F. Robards, U. S. M. C., who is a civil engineer, was placed in immediate charge of the work on the League Island barracks, and performed this duty in a most efficient manner.

The officers attached to the marine barracks, navy-yard, League Island, Pa., are now compelled to live a long distance from the barracks. Not only as a matter of convenience, but in the interest of discipline and efficiency, it is important that the officers should reside within the limits of the station where they could be constantly in touch with the men. It is therefore important from a military standpoint, and in the interests of economy to the Government, that quarters for officers should be erected at the marine barracks, navy-yard, League Island, in the near future.

NAVAL HOME, PHILADELPHIA, PA.

The marine guard at the Naval Home, Philadelphia, Pa., at present consists of 19 men. The guard is under charge of Gunnery Sergt. Philip Gaughan, U. S. M. C. It is the policy of the Brigadier-General Commandant, whenever possible, to select old marines with long and faithful records for detail to the Naval Home guard, as this is considered a post of honor.

DEPOT OF SUPPLIES, PHILADELPHIA, PA.

During the year the clothing manufacturing depot and assistant quartermaster's office, Philadelphia, Pa., has been under the charge of Maj. C. L. McCawley, assistant quartermaster, U. S. M. C. In consequence of the increase of the corps and the many occasions on which it has been necessary to fit out detachments of men for service at sea and in the Far East, the work of this depot has very greatly increased; but on my inspection, a short time ago, I found everything connected with the office and depot in excellent condition, and the assistant quartermaster in charge of the depot is entitled to much credit for the systematic and zealous manner in which he has performed his duties.

The building occupied as a depot of supplies and assistant quartermaster's office in Philadelphia has become entirely inadequate to accommodate the exceedingly large quantity of clothing and supplies now received at and issued from the depot, and upon representation to the effect that the available space was too small for the purpose required, the owner of the building kindly made an addition without any increase in the annual rental of $4,000; but with the increasing business of the depot, due to the augmented strength of the corps, the building has again become badly overcrowded and there is an immediate necessity for more room. To meet this urgent need I have inserted in the annual estimates for the next fiscal year an increase of $1,000 in the annual rental. The additional space which can be obtained for this increased rental, however, will only temporarily relieve the congestion, as the assistant quartermaster reports that the present building is far too crowded for either safety to the goods stored therein or their prompt handling, and that much time and labor are lost by constant shifting and repacking of materials; and many things must be again placed in heavy and cumbersome boxes and stored on the floors because of the paucity of shelving, although every inch of available space is occupied, greatly to the exclusion of light, ventilation, etc. In May last, when a large purchase of stores for the Philippines was made, it was utterly impossible to accommodate the stores in the depot building, and the renting of a storehouse at $75 per week became necessary, and this will happen on future occasions unless more space is granted. Another and very important fact is the lack of security from fire, as the building is not fireproof, and although all possible precautions are taken in the way of distributing fire extinguishers, fire boxes, buckets, hand grenades, and hose throughout the building, and drilling the force of the depot in the use of the same, the building would, owing to its not being a fireproof structure, soon burn if once attacked by flames. In view of the above it is obviously in the interests of economy to the Government that a site should be purchased and a building erected for the use of this depot in order to safely and conveniently store the clothing and supplies required for issue to the corps. A suitable building could be plainly and substantially constructed for $150,000, which would meet all requirements as to safety and space, and it is recommended that such a building be constructed for use of this Department.

HEADQUARTERS UNITED STATES MARINE CORPS.

In my annual report for years past attention has been invited repeatedly to the dilapidated and unsafe condition of the building which has been occupied for many years as offices for headquarters of the Marine Corps, in which most of the valuable records of the corps are stored, and last year I submitted an estimate of $50,000 for the erection of a new office building for headquarters of the corps. This sum has been appropriated by Congress, plans and specifications have been prepared, and the work will soon commence.

Preparatory to the commencement of such work, by order of the Secretary of the Navy, the headquarters offices were transferred, on June 10, 1901, to the Bond Building, corner of New York avenue and Fourteenth street, Washington, it having been found after a thorough search that this was the only building in the city where the requisite number of suitable rooms were available.

WASHINGTON, D. C.

Last year in my report I referred to the appropriation by Congress of $4,500 for the erection of a building at the marine barracks, Washington, D. C., for the use of the Marine Band and for enlisted men's quarters, and stated that the work on such building was progressing satisfactorily. This work has now been entirely completed and the building is occupied for the purposes for which it was intended. The lower floor is one large room which is used as a practice room for the band, and the upper story gives very comfortable additional dormitory space for about 50 men. In addition to this the room formerly used by the band for practice is made available for the use as domitories. Numerous minor repairs have been made to the marine barracks, Washington, D. C., including improvements to plumbing, porches, and exterior paint work, and the barracks is now in good condition, considering its age.

MARINE BARRACKS, NAVY-YARD, WASHINGTON.

The marine barracks, navy-yard, Washington, D. C., is in good condition, the only repairs required being those incident to the usual wear and tear on an old building, which can be made out of the regular appropriation "Repair of barracks."

NORFOLK, VA.

Recently a board of survey on the marine barracks, navy-yard, Norfolk, Va., reported that the barracks building was unstable, owing to defective foundations and the presence of quicksand, and that the condition of the barracks was such as to make any expenditure for repairs a waste of money. These reports further showed that the barracks is now, or will become in the near future, a menace to life and limb, and that owing to this defective foundation and construction, bulging walls, etc., it is liable to collapse in case of strong winds or heavy loads on the floors. After receiving this report of survey I ordered First Lieut. Logan Feland, U. S. M. C., who is a civil engineer, to proceed to Norfolk and thoroughly inspect the barracks. The report of

this officer confirmed in every way the report of the board of survey. In view of these reports I deemed it my duty to submit an estimate of $100,000 for the construction of new modern fireproof barracks at this station.

I also directed the quartermaster to submit an estimate of $42,000 for officers' quarters at the navy-yard, Norfolk, Va. At present the officers attached to the barracks have to live either in Portsmouth or Norfolk, a long distance from their duties. This keeps them from being in close touch with the men, which is very subversive of discipline. In addition to being of great importance from a military standpoint for the officers to live within the limits of the station, the building of quarters will result in economy to the Government, owing to the large amounts now being paid for "hire of quarters." In view of the condition of the old barracks at Norfolk, and the need for quarters at that station, it is earnestly hoped that the Secretary will recommend to Congress the appropriation of the amounts asked for new barracks and quarters.

NEWPORT, R. I.

When the marine barracks at the Naval Training Station, Newport, R. I., was built the station had not reached its present importance, and the barracks was designed for the small guard then necessary. This station has now become of such importance as to require a much larger guard of marines, especially on account of the great increase in the number of apprentices there. The commandant of the station considers that a much larger force is necessary in order to perform the additional duties required of the marines.

Any increase of this command would require additional quarters for the men, and the barracks would have to be enlarged. This could be effected at moderate cost by continuing the present barracks to the eastward about 75 feet.

The junior officers at Newport are now occupying a few rooms in the barracks building which are intended for storerooms and offices, and are much needed for these purposes. Junior officers' quarters should, therefore, be provided.

I am informed by the commanding officer that the commandant of the station kindly granted permission for the marine detachment to go out on the *Hist* twice a week for target practice at sea with the secondary battery. This has been carried out with good results, and the actual target practice will do a great deal toward preparing the men for duty on board ship.

Two of the recently appointed second lieutenants of the corps have been stationed at Newport during the year, and the commanding officer has given special attention to the thorough theoretical and practical instruction of these officers in drill regulations, manual of guard duty, firing regulations, signaling, and in all practical exercises, such as parades in heavy marching order, practice marches, minor tactics, advance and rear guards, outposts, etc.

ANNAPOLIS, MD.

In my last annual report it was stated that the amount appropriated by the act of Congress approved March 3, 1899, for the erection of a marine barracks and three sets of officers' quarters at the Naval

Academy, Annapolis, Md., was insufficient for the purpose. The items of this appropriation were as follows: Barracks, $50,000; commanding officer's quarters, $9,000; two sets of officers' quarters, $14,000; clearing and grading, laying of sewers, etc., $8,000. The widest publicity was given to requests for proposals, but no bid was received within the appropriation. Accordingly, on March 15, 1900, I submitted to the Department special estimates for the following increases in the appropriations: For barracks, $75,000; commanding officer's and junior officers' quarters, $19,500. This estimate was transmitted to Congress with the favorable recommendation of the Department, but Congress failed to make the required increased appropriation. I therefore included the additional sums in my regular estimates for the fiscal year ending June 30, 1902, and Congress provided $75,000 additional for the barracks, and $10,000 additional for officers' quarters.

The plans of the barracks and quarters at Annapolis were prepared by Mr. Henry Ives Cobb, architect, as stated in my last report. The contract for the erection of the barracks has been made with the Charles McCaul Company, and the work of construction is about to begin.

First Lieut. Logan Feland, U. S. M. C., who is a civil engineer, will be placed in immediate charge of the construction work.

The appropriation now available will permit of the erection of a modern, fireproof barracks of gray brick, in a style which will harmonize with the other modern buildings being erected at the Naval Academy. This building when finished will accommodate over 300 men, and will enable me to keep an adequate force of men there, and to have thorough drills and instructions.

The site of the barracks and quarters is in a field across the Grave Yard Creek, allotted to the Marine Corps by the Department some time since, and the houses will face on the continuation of one of the streets of the Academy. The exact location of the barracks and quarters was decided upon by me during my recent visit to the Academy, after consultation with the superintendent, and with his approval.

The marines at Annapolis are still in camp, but in a short time they will be transferred to the *Santee*, where they will remain until the barracks is completed. The command being attached to the *Santee*, their accounts are on the books of the paymaster of the station, and they can receive the navy ration.

No bid was received to erect the officers' quarters which was within the amount appropriated by Congress, and the plans and specifications for the quarters are accordingly being revised with a view to decreasing the cost thereof, in order that it may be possible to erect the quarters within the sum provided.

PENSACOLA, FLA.

The marine barracks at the navy-yard, Pensacola, Fla., is in good condition. The building occupied as barracks was turned over to the Marine Corps by the Navy, and has proved to be a most excellent and comfortable building for this purpose. As it is located close to the water the men are enabled, by a few steps, to reach a good beach for bathing.

Formerly the junior marine officers were compelled to live in rooms

partitioned off in one end of the barracks building. Now, however, through the kindness of the commandant of the station, Capt. W. W. Reisinger, U. S. N., they have been allowed quarters in one of the unoccupied houses in the navy-yard, which, at small expense to the corps, has been properly fitted up, and now provides very comfortable accommodations for the junior officers.

Upon the recommendation of the commandant of the station, I inserted in my estimates for the coming fiscal year $3,500 for the erection of a veranda on the seaward side of the enlisted men's quarters, which will contribute greatly to the comfort of the men, as well as improve the appearance of the barracks. It is hoped that this small estimate will be approved by the Secretary.

To meet the necessity for more men at the marine barracks, navy-yard, Pensacola, Fla., and in accordance with the urgent request of the commandant of the station, orders were issued from these headquarters on November 15, 1900, directing Capt. J. A. Lejeune, U. S. M. C., to take charge of a detachment consisting of 1 sergeant, 1 drummer, 1 trumpeter, and 37 privates at Norfolk, Va., and proceed with this detachment to Pensacola for duty. Upon his arrival Captain Lejeune assumed command of the barracks at the station.

SERVICES OF MARINES AT FIRE, FORT BARRANCAS, FLA.

On the morning of July 12, 1901, the navy-yard, Pensacola, Fla., received a call from Fort Barrancas to assist in the extinguishment of a fire at that place. In response to this call the tug *Sebago* was immediately dispatched, fitted with the necessary fire hose, and with a detachment of 20 marines on board under the immediate charge of Acting Sergt. John F. Burke, U. S. M. C., the detachment being under the direction of Lieut. Commander J. B. Collins, U. S. N. They proceeded to the wharf at Barrancas, and in about eight minutes a hose was coupled and run out, and the fire was extinguished.

The commandant, navy-yard, Pensacola, Fla., in reporting concerning the fire, states that the ice-making plant was destroyed before he received a call for assistance, but that the adjoining buildings were doubtless saved by the prompt action of the marines. He also says that Commander J. B. Collins, under whose direction the marines worked, speaks most highly of their services. In his letter to the commandant of the Marine Corps relative to the services of the marines on this occasion, the commandant of the Pensacola navy-yard says:

> It gives me great pleasure to again testify to the promptness of the guard here in responding at times of emergency.

PORT ROYAL, S. C.

In April, 1901, the Department appointed a board of naval officers to examine all the buildings at the Port Royal station, and to report to the Department which of them could be made use of as quarters for training landsmen, and what changes should be made to facilitate the work in view, the preliminary training of landsmen. Among other things, the members of this board reported as follows:

> The present marine guard consists of 36 men, commanded by a captain, and the present quarters can only accommodate this number. The board recommends the establishment of a two-company post, and if it is not considered advisable to quarter the extra men in tents, arrangements can be made to quarter them in building No. 19.

The board considered this increase in the number of marines necessary because of the proposed large increase in the number of men to be at the station under training, to prevent the introduction of liquor on the reservation, to guard public property, etc.

In accordance with the Department's directions, steps are now being taken to make the necessary sewer connections with building No. 19, and in other respects to fit this building for occupation by the additional number of marines who will be stationed at Port Royal.

In view of the uncertainty as to the requirements at Port Royal, on account of the probable establishment there of a training station for landsmen, but few minor repairs and improvements have been made at the post during the year.

The alterations being made in building No. 19 at the Port Royal station, above referred to, which was originally intended for use as a paint shop, will only render this building suitable for temporary occupancy by the marines, and in order to properly quarter the increased force of men new barracks will be necessary, or an additional story will have to be added to the present barracks. No recommendations will be submitted in this direction, however, until the requirements become more fully known and the strength of the post is definitely settled.

NAVAL STATION, ALGIERS, LA.

The act of Congress approved March 3, 1900, appropriated $15,000 for the construction of a suitable barracks and set of officers' quarters at the naval station, Algiers, La., and preliminary steps have already been taken toward the erection of these buildings. It is hoped that they will be ready for occupancy in the early spring.

MARE ISLAND, CAL.

Extensive minor repairs have been made at the marine barracks, navy-yard, Mare Island, Cal., during the year, including improvements to the sewer system, at an expense of $4,200, authorized by the act of Congress approved June 7, 1900. This work has been completed in a satisfactory manner under the supervision of Civil Engineer R. C. Holliday, U. S. N., and the sewer system installed is an excellent one.

The act of Congress approved June 7, 1900, also provided $15,000 for increasing the size and capacity of the naval prison at Mare Island, Cal. As the quartermaster informed me that there was no officer of his department available for assignment to the duty of superintending the improvements on the prison named, I recommended that the work of preparing the plans and specifications and superintending the improvements be performed by the Bureau of Yards and Docks, Navy Department, and the work is now being done by that bureau. By direction of the Secretary of the Navy the appropriation for these improvements to the naval prison was credited to the Bureau of Yards and Docks. Reports have not been received at these headquarters as to the progress of the work.

STORM AT MARE ISLAND.

On the morning of December 14, 1900, a severe storm did considerable damage to the buildings of the Marine Corps at the navy-

yard, Mare Island. The wind carried away about 4,000 square feet of the tin roof of the barracks, destroyed a considerable portion of the cornice and guttering, badly damaged two skylights of the barracks proper, and the roof and skylight of the shooting gallery. One of the target butts caved in, and the frame was blown down and destroyed, and a number of windows in the barracks were broken. Several large trees were blown down, carrying the electric-light wires with them. The covering of the water tank at the commanding officer's quarters was blown down, and other minor damage was done. Through the courtesy of the officers at the navy-yard, large sails were supplied to temporarily cover the exposed places in the roof, and permanent repairs were immediately begun and soon completed.

In his report relative to the damage done by the storm, the commanding officer of marines states that the intelligent and prompt action of Second Lieut. R. Y. Rhea, U. S. M. C., who was officer of the day, reflected great credit upon him, as he established patrols along the water front, and personally superintended all possible efforts to prevent loss of life and damage to property from the storm.

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ARMY COURTESIES.

During the past year, as in former years, the army authorities have been most courteous in obliging the Marine Corps with transportation for its officers and enlisted men and stores on army transports, and in furnishing the corps with certain rations and other supplies upon application.

All the regular appropriations and the several allotments made to the Marine Corps from the emergency fund of the Navy Department have been carefully and judiciously expended, all purchases being properly substantiated by vouchers.

I am pleased to state that the corps has been able to meet promptly and satisfactorily the many and varied demands which have been made upon it during the year, and feel justified in stating that it has maintained its high reputation for efficiency.

Very respectfully,

CHARLES HEYWOOD,
Brigadier-General, Commandant.

The SECRETARY OF THE NAVY.

REPORT

OF THE

SECRETARY OF THE INTERIOR.

DEPARTMENT OF THE INTERIOR,
Washington, D. C., November 21, 1901.

SIR: I have the honor to submit herewith the annual report of the operations of this Department during the past fiscal year, reference being had to the attached reports of the several bureaus and offices connected therewith for a more detailed statement as to the business transacted therein, respectively.

The progress made in the dispatch of the public business has been very gratifying, and notwithstanding the large increase therein during the year the work of the several bureaus and offices is well in hand. This increase in the volume of work is particularly noticeable in the Secretary's Office, the General Land Office, and the Patent Office; in all likelihood it will continue to increase during the coming year rather than diminish, and in order to be properly and expeditiously handled additional clerical force must, of necessity, be provided.

I have heretofore called attention to the labor incident to the supervising of the work brought before the Secretary and his assistants, and the great tax on their energies involved in its consideration and disposition. Again adverting to the subject, I desire to call special attention to the fact that the salary now fixed by law for the First Assistant Secretary of this Department is not an adequate compensation for the exacting duties required to be performed by him; and the same may be said regarding the salaries paid to the Assistant Secretary and to the chiefs of division in the Secretary's Office. These should be readjusted by Congress on a more equitable basis at the earliest practicable date.

The energy and ability with which the duties and obligations devolving upon the officers of the various divisions and bureaus of this Department have been discharged have been fully appreciated, and I cheerfully make acknowledgment to the Assistant Secretaries, the Assistant Attorney-General, the heads of bureaus, the chief clerk of the Department, and the chiefs of division of the Secretary's Office for the valuable assistance rendered by them in the disposition of the public business.

OFFICE OF THE ASSISTANT ATTORNEY-GENERAL.

The force in this office is occupied in greater measure with the consideration of legal problems and claims arising under the laws of the United States relating to public lands and Indian affairs, and in lesser measure with the disposition of matters arising under the pension, patent, and other laws, the administration of which is committed to this Department.

Excepting as action in some matters is withheld or suspended for the time being, awaiting a decision in the courts upon a test case involving like questions, the work of the office is practically up to date or current.

One effect of bringing the work up to date has been to discourage and greatly to reduce the number of groundless appeals and motions for review in land cases, heretofore frequently presented for the purpose of obtaining delay and forcing the successful claimant to make some money or other concession to the unsuccessful one as a means of securing a withdrawal of the appeal or motion for review, and thus removing an obstacle to closing the contest and issuing a patent.

While, however, the volume of work relating to public lands has been perceptibly reduced, there has been more than a counterbalancing increase in the work relating to Indian affairs. The increased allotment of lands in severalty to the Indians and opening of the surplus lands to the operation of the public-land laws, and the taking of more direct control of the affairs of the Five Civilized Tribes in the Indian Territory have brought forth many legal problems, some new and quite difficult, the solution of which has fallen to this office. Some of these questions have been carried into the courts of the District of Columbia and elsewhere, in mandamus and injunction suits, and the work of representing the Department in this litigation and of sustaining the legislation of Congress, which is drawn in question, has been performed principally by the Assistant Attorney-General and has involved much time and labor.

I can not commend too highly the able manner in which the affairs of this office have been administered.

The matters at this time awaiting consideration and disposition are: One hundred and sixty-eight appeals from the Commissioner of the General Land Office, 32 motions for review of decisions heretofore rendered upon such appeals, 58 miscellaneous matters largely relating to Indian affairs, and 7 requests for law opinions by the Assistant Attorney-General.

The matters considered and disposed of during the year are as follows: Eleven hundred and nine decisions receiving the approval and signature of the Secretary of the Interior in appeals from the Commissioner of the General Land Office; 317 decisions receiving the approval and signature of the Secretary of the Interior upon motions

for review; 644 decisions, regulations, and orders receiving the approval and signature of the Secretary of the Interior in miscellaneous matters; 65 law opinions receiving the signature of the Assistant Attorney-General and the approval of the Secretary of the Interior, and 1,090 decisions upon pension appeals receiving the approval and signature of the Assistant Secretary of the Interior.

The more important of the land decisions and opinions are included in volumes 30 and 31 of the "Land Decisions," the latter volume being now in course of publication.

INDIAN AFFAIRS.

The total Indian population of the United States, exclusive of the New York Indians and those in the Indian Territory embraced in what is generally known as the Five Civilized Tribes, is approximately 178,919; they are located on 156 reservations in various sections of the country, containing about 55,127,000 acres.

During the past year 8,857 allotments have been made, having an approximate acreage of 1,125,970.80 acres. Allotments of land in severalty, embracing in the aggregate 7,862,475.11 acres, have been made since the passage of the act of February 8, 1887 (24 Stats., 388), to approximately 64,853 Indians.

The general condition among the Indians during the year has been fairly satisfactory. Aside from the disturbance created in the Indian Territory by certain full-blood Creek Indians, known as the Snake Band, which was easily suppressed, no serious troubles have occurred.

Some progress toward civilization has been made, but not in such a degree as the efforts put forth by the Government for the betterment of their condition and the large expenditure of money for their comfort and enlightenment would seem to justify.

The management of the Indian service in the field and in the schools, while satisfactory under existing conditions, is not deemed to be the best for the welfare of the Indians, and different methods will hereafter be adopted. This policy, as hereinafter indicated, contemplates requiring the working by Indian allottees able to do so of a fair portion of lands allotted them and the contributing by their industry to their own support of all not entirely disqualified by actual disability, physical or otherwise; the discontinuance of the issue of rations to those known and determined to be able to support themselves, and the extension to the latter of every possible aid for their well-being and encouragement; the inauguration of industrial training in all schools where not now established, so that Indians of both sexes may be taught the trades or industries adapted to their circumstances.

The Indian school courses, which originally contemplated the giving of a common school education, have been conducted on a plane far beyond the ordinary needs of one whose every-day pursuits would in all probability be largely confined for a long time to the farm and

industry of stock raising. The foundation of an education usually laid in the common schools of the country is all that the Government could reasonably be expected to furnish the Indian, and therefore the course in all Government schools outside, as well as on reservations, will be confined to the essentials of such an education.

The six nations composing the New York Indians number about 5,232, and are located on eight small reservations, aggregating in all 88,000 acres in the State of New York, to some of whom small sums of money and other annuities are distributed under treaty stipulations. The Five Civilized Tribes in the Indian Territory comprise the Choctaw, Chickasaw, Creek, Cherokee, and Seminole Indians. Their estimated population, including freedmen, is 84,507. The lands in the Territory controlled by the Five Civilized Tribes have an aggregate area of approximately 19,475,614 acres. About 300,648 white people, noncitizens, are said to be living within the boundaries of the Five Civilized Tribes. Two thousand and twenty-one allotments have been made to the members of the Seminole tribe of Indians, and in the Creek Nation there have been recorded 10,617 selections for allotments.

During the year there were employed 1,621 Indians in the agency service proper as clerks, police, harness makers, teamsters, herders, shoemakers, butchers, blacksmiths, and kindred occupations to whom salaries were paid aggregating $315,802, and in the Indian school service there were employed 679 Indians, who worked as nurses, matrons, clerks, cooks, laundresses, industrial and other teachers, receiving salaries aggregating $247,000.17.

FINANCIAL.

APPROPRIATIONS.—The aggregate appropriations on account of Indian service for the fiscal year ending June 30, 1901, was $9,040,475.89. Of this amount, $8,873,239.24 was provided for in the Indian appropriation act for the fiscal year 1901, approved May 31, 1900, and $167,236.65 by the deficiency acts of January 4 and March 3, 1901.

The amount appropriated for the fiscal year ending June 30, 1902, is $9,736,186.09, being an excess for 1902 over 1901 of $695,710.20, and the items of difference between 1901 and 1902 are as follows:

Increase:		
Incidental expenses		$720.00
Support of schools		160,846.35
Payment for lands		1,249,000.00
Capitalization of annuities		154,400.00
Total		1,564,966.35
Decrease:		
Current and contingent expenses	$106,000.00	
Fulfilling treaty stipulations	286,601.36	
Miscellaneous support	18,500.00	
Miscellaneous	462,154.79	
		869,256.15
Net increase		695,710.20

The different objects of appropriation for the Indian service for the years 1901 and 1902, respectively, are shown in the following table:

	1901.	1902.
Current and contingent expenses	$844,240.00	$738,240.00
Fulfilling treaty stipulations	2,512,447.45	2,229,846.09
Miscellaneous supports, gratuities	646,500.00	628,000.00
Incidental expenses	92,680.00	93,400.00
Support of schools	3,083,403.65	3,244,250.00
Miscellaneous	1,185,204.79	723,050.00
Payment for lands	676,000.00	1,925,000.00
Capitalization of annuities	.....	154,400.00
Total	9,040,475.89	9,736,186.09

Excess of 1902 over 1901, $695,710.20

EXPENDITURES.—The following sums were expended on account of the Indian service for the fiscal year ending June 30, 1901, from moneys appropriated, from trust funds, including principal and interest, and from grazing moneys, in all aggregating $10,896,073.35, viz:

Current and contingent expenses		$747,997.87
Fulfilling treaty stipulations		2,413,090.50
Miscellaneous support—gratuities		644,446.16
Trust fund:		
Principal	$392,042.39	
Interest	1,347,605.80	
		1,739,648.19
Incidental expenses		80,196.78
Support of schools		3,024,021.81
Miscellaneous		2,246,672.04
Total		10,896,073.35

INCOME.—The income of the various Indian tribes from all sources during the year may be stated as follows: Interest on trust funds, $1,500,862.38; treaty and agreement obligations, $2,493,249.93; gratuities, $733,400; Indian moneys, proceeds of leases, labor, etc., $611,368.23; aggregating $5,338,880.54, as against $5,599,883.11 for the previous fiscal year—a falling off of $260,952.57, of which $209,398.89 is due to the expiration of treaty obligations and the remainder to a decrease in the proceeds of labor, leases, etc.

EDUCATION.

It was stated in my last annual report that "The Indian school system does not contemplate giving the Indian what is known as a 'higher education.'" While this is true in the abstract, the system in vogue, especially in the nonreservation schools, and even in some of those upon reservations, seems to be gradually growing into one that is leading up to the higher branches of education, thus unfitting the Indian for home life with his tribe upon the reservation after his course is completed, and it is seriously questioned whether

the present method is calculated to accomplish the good results hoped for. I doubt it very much, and for some time have been of the opinion that too much attention is paid to branches outside of those necessary to give the Indian pupil a common-school education. I am confirmed in my opinion that the curriculum should be restricted to the common-school course, because of facts that have been brought to my attention by the Commissioner of Indian Affairs in his annual report.

Industrial training should and will be inaugurated in both the nonreservation and reservation boarding schools, where not already established, to consists of carpentry, blacksmithing, harness, shoe, and wagon making, and such other industries or trades as males may be adapted to, and females ought to be trained especially in laundering, cookery, tailoring, dressmaking, and the arts of housekeeping, to which more than ordinary attention should be paid.

With this knowledge as a foundation, the Indian youth would be fully as well, if not better, equipped for the battle of life than are a large majority of the sons and daughters of those who people the sections where the Indians are located, and the foundation for whose education is laid in the district or common schools for the neighborhood, where eventually the Indians themselves must necessarily seek the knowledge that they are now getting through the munificence of the Government.

If "higher education" be desired, the means to supply the same should be furnished by the individual effort of those who seek it, or by those interested in such individuals. Otherwise the Government might justly be charged with discriminating against those who pay the taxes from which is derived the funds that go to support schools for Indians. In other words, the time has come when the Indian must make an effort at self-support and for the support of those dependent upon him; and I know of no greater use to which a portion of his money may be devoted, if he desires better education for his children, than for himself to pay the expense thereof. The Government will provide the means upon which to found such "higher education," but it should not be expected or asked to do more.

I am of the opinion that nonreservation schools have fully served their purpose, and that further extension of these schools should not be permitted, but rather that increase in facilities for education of Indians should be sought in the district or common schools of the States and Territories adjacent to reservations, and in the establishment of more day and boarding schools upon reservations. In the utility and usefulness of the latter the older Indians would have object lessons, and be less inclined to object to permitting their children to attend schools.

SCHOOLS.—The number of nonreservation schools remains the same as at the date of the last annual report (25), but with an increase of 676 in the average attendance.

There were 88 so-called reservation boarding schools, an increase of 7 over the previous year, with an increase in the average attendance of 1,222 pupils.

There were 138 day schools in operation last year, a decrease of 9 from the number of the previous year, with a decreased attendance of 248 pupils.

Contracts with 19 public schools for the education of Indian youths were in operation last year, 3 less than the year before; but the average attendance was 131, an increase of 13 over that year.

ATTENDANCE.—Exclusive of the Indians in New York and among the Five Civilized Tribes, the following are statistics for school attendance during the fiscal years 1900 and 1901:

Kind of school.	Enrollment.			Average attendance.			Number of schools, 1901.
	1900.	1901.	Increase.	1900.	1901.	Increase.	
Government schools:							
Nonreservation boarding	7,430	7,928	498	6,247	6,917	676	25
Reservation boarding	9,604	10,782	1,178	8,094	9,316	1,222	88
Day	5,090	4,622	[1]468	3,525	3,277	[1]248	138
Total	22,124	23,332	1,208	17,866	19,510	1,650	251
Contract schools:							
Boarding	2,376	.....	[1 2]2,376	2,098	.....	[1 2]2,098	.....
Day	30	.....	[1]30	24	.....	[1]24	.....
Boarding specially appropriated for	400	[3]130	[1]270	329	[3]111	[1]218	1
Total	2,806	130	[1]2,676	2,451	[3]111	[1]2,340	1
Public schools	246	257	11	118	131	13	(4)
Mission boarding	1,062	3,531	2,469	946	3,120	2,174	47
Mission day	213	272	59	193	205	12	5
Total	1,521	4,060	2,539	1,257	3,456	2,199	52
Aggregate	26,451	27,522	1,071	21,568	23,077	1,509	304

[1] Decrease.
[2] Taken up in mission schools.
[3] Hampton.
[4] Nineteen public schools in which pupils are taught; not enumerated here.

SCHOOL PLANTS, ETC.—In view of the large amounts annually expended in the erection and repair of school plants, which averages over $500,000 per annum, it was deemed to be in the interest of economy and good business management to engage the services of experts to plan and supervise the construction of new buildings and water, sewer, heating, and lighting systems, and not, as heretofore, rely in too large a degree on the judgment of agents, school superintendents, and other officials in such matters. Therefore, in July last a supervisor of engineering and a supervisor of construction were employed, whose duty it will be to take charge of all matters pertaining to construction and repair of school plants. I have no doubt that the employment of these experts will result in a more economical use of the funds

appropriated for the erection and improvement of school plants, as well as better construction and generally more satisfaction in all matters of detail.

Besides the general appropriation of $240,000, appropriations for specified localities amounting to $419,050 have been made for use during the current fiscal year in the construction, purchase, lease, and repair of school buildings, and for sewerage, water, heating, and lighting systems, and for the purchase of school sites, etc. Substantial improvements are now being made to many of the school plants, and some new buildings are under construction.

IMPROVEMENTS TO SCHOOL PLANTS.—Improvements to school plants have been made during the fiscal year ending June 30, 1901, at the Cheyenne and Arapaho Agency, Okla.; Colville Agency, Wash.; Fort Yuma, Ariz.; Fort Lewis, Colo.; Green Bay Agency, Wis.; Hoopa Valley, Cal.; Jicarilla, N. Mex.; Klamath, Oreg.; Lac du Flambeau, Wis.; Leech Lake, Minn.; Ponca, Sac and Fox, and Pawnee, Okla.; Oneida, Wis.; San Carlos, Ariz.; Pima, Ariz.; Greenville, Cal.; Cass Lake, Minn., and Yankton, S. Dak.

The capacities of a number of schools have been increased by the erection of new dormitories. A new school plant has been completed for the Winnebago Reservation, in Nebraska, for the accommodation of 80 to 100 pupils, one for the Southern Ute Reservation will be ready by January 1, 1902, and one for the accommodation of 125 pupils for the Jicarillas, in New Mexico, will soon be completed.

In addition to the foregoing improvements, a number of such have been specially appropriated for by Congress for nonreservation schools, while for other schools treaty funds have been available.

At the Chamberlain (S. Dak.) and Carson City (Nev.) schools, shop buildings have been erected. Modern electric-light system, cold storage, and warehouse have been erected at Chilocco school, Oklahoma.

For Genoa school, Congress provided $25,000 for a new building and $5,000 for a new hospital. The new dormitory for Grand Junction school, Colorado, for which last year $20,000 was appropriated, has been completed. At Haskell Institute, Kansas, the sum of $65,000 has been expended for additional school buildings and steam plant. At Salem school, Oregon, provision has been made for additional buildings and an extension of the steam-heating and electric-lighting plant, for which Congress appropriated $41,000.

The purchase of additional land for the Phoenix school, Arizona, for which Congress appropriated $4,800, will give needed facilities for extending industrial training.

Congress for the fiscal year 1901 appropriated $75,000 for the erection of school buildings at Riverside, Cal., and in the act for the fiscal year 1902 increased the amount to $150,000, and also provided $10,000 for additional land. The buildings are now in course of construction,

and it is hoped that this school will be opened during the current fiscal year.

Other improvements are contemplated or being made, notably at the Grand River school, on the Standing Rock Reservation, in North Dakota, where the old buildings are to be remodeled, a new school building erected, and a complete water and sewer system established, at a cost of nearly $40,000.

Provision was made by the Indian appropriation act for the fiscal year 1902 for the establishment of an Indian industrial school at Mandan, N. Dak., "upon lands to be donated to the Government for that purpose, of not less than 160 acres in extent," and $50,000 was appropriated for the erection and completion of the buildings.

A number of sites have been offered, but no selection has so far been made.

CUTTING OFF RATIONS TO INDIANS.

In a communication to the Executive, on November 26, 1900, on the subject of the issue of rations to Indians, the Department took occasion to invite attention to the stipulations of the treaties and agreements with the Great Sioux Nation, which obligate the Indians to provide for themselves when able to do so.

I then said, in effect, referring to certain individual Indians who complained that they had not been supplied with the full ration promised by their treaty, that a daily ration had been furnished them of sufficient quantity, "if properly cared for and used with providence, to amply provide for all their needs."

After a review of what had been done under the treaties by the Government for the bands to which these particular Indians belonged, I stated further:

> From the representations made by the writers of the communications referred to, it does not seem that they or the other Indians of the * * * Agency are any nearer the goal of self-support than they were twenty-four years ago, when the treaty was made. Regardless of the provision in the treaty looking to the reduction in the ration as they become able partly, if not wholly, to sustain themselves, which they appear to be able to do, and notwithstanding the facts stated by the Commissioner that individual Indians of this band own nearly 20,000 head of cattle, and that more than 1,500 head were purchased from them last year, at a cost to the Government of more than $50,000, which cattle were afterwards issued to and eaten up by the band, they still claim full benefits under the treaty named.
>
> From the facts stated, it does seem that the time has come when individual Indians who are so well qualified to at least furnish a part of their own support, as some of these Indians seem to be, should be required to take upon themselves a portion of the burden of their own care. The Government has faithfully and well fulfilled its obligations to them, and as the treaty * * * is mutual in its provisions—

I recommended that those who were known to be able to do so should be required to support themselves and families, and that no rations be issued to them.

Notice was accordingly given by the Commissioner of Indian Affairs to the agents of six of the Sioux agencies, and with much gratification

I am now able to report that at one agency 870 names were dropped from the ration rolls, 400 at another, and 300 at another—all these persons being declared and found to be entirely self-supporting, some of them having grown wealthy and some being able to live in comparative affluence.

Similar orders were given to Indian agents having charge of agencies where a modified (not full) ration has been furnished as a gratuity (not under treaty or agreement as in the case of the Sioux). In these cases the result has been equally gratifying, and it is felt that a great step toward independence has been taken by the Indians, who have shown a willingness without apparent discontent to depend upon their individual efforts for the maintenance of themselves and families.

These self-respecting Indians deserve commendation for their determination to relieve the Government of their care and encouragement and sympathy in their efforts at self-support. Many others will doubtless follow their example, and thus the gradual discontinuance of the ration system is looked for so far as it applies to able-bodied Indians.

Of course it is expected that assistance will be needed by indigent and helpless Indians, at least until their relations or friends are able or willing to care for them or other provision for their maintenance is made.

ALLOTMENTS AND PATENTS.

ALLOTMENTS ON RESERVATIONS.—During the year 8,857 allotments were approved, as follows:

Chippewas of Lake Superior on the Bad River Reservation, Wis	5
Chippewas of Lake Superior on the L'Anse and Vieux d'Sert Reservation, Mich.	15
Chippewas of the Mississippi on the White Earth Reservation, Minn	4,372
Kiowas, Comanches, and Apaches, Oklahoma	2,759
Omahas, Nebraska	19
Siouxs, Lower Brule Reservation, S. Dak	555
Wichitas and Affiliated Bands, Oklahoma	965
Winnebagos, Nebraska	167

Schedules of 1,040 other allotments have been received at the Indian Office, but no action has been taken thereon.

PATENTS.—During the year 3,265 patents were issued and delivered to the following Indians:

Cheyennes and Arapahos, Oklahoma	4
Chippewas of Lake Superior on the Bad Earth Reservation, Wis	5
Chippewas of the Mississippi on the Chippewa Reservation, Minn	361
Chippewas of the Mississippi on the Leech Lake, Cass Lake, and other reservations in Minnesota	479
Colville Reservation, Wash. (restored portion)	432
Grande Ronde Reservation, Oreg	1
Mandan and others on Fort Berthold Reservation, N. Dak	948
Otoes, Oklahoma	440
Ottawas, Indian Territory	1
Yakimas, Washington	603

CROW RESERVATION, MONT.—The work of allotment to the Crow Indians, which was suspended several years ago because of the construction of extensive systems of irrigation, provided for by agreements with them in 1890 and 1892, was resumed during the past fiscal year.

KIOWA, COMANCHE, AND APACHE RESERVATION, OKLA.—Congress extended for eight months the time for opening the reservation (act of January 4, 1901, 31 Stat., 727). Allotments to the Indians were commenced at the earliest possible moment, under the auspices of Indian Inspector C. F. Nesler, and the final schedules thereof were approved by the Department on June 18 last.

WICHITA RESERVATION, OKLA.—Allotments to these Indians were made under the same supervision, and the final schedules were approved July 2 last. A schedule of 27 adopted members was approved July 3, 1901, one day prior to the date of the order of the President opening these and the Kiowa, etc., lands to settlement.

NONRESERVATION ALLOTMENTS.—The nonreservation allotments in the Redding and Susanville land districts, California, from reports that seem well founded, appear to be unsuitable, and in many cases the Indian did not know where his land was located, the Indian of course in such cases failing to settle thereon. Investigation of those in the Susanville district has been or is being made. Allotment work under the fourth section of the general allotment act of February 8, 1887, and the amendatory acts is being carried on in Oregon and Washington. No allotments to nonreservation Indians have been approved or trust patents issued for such allotments during the period of this report.

Many allotments made on the Sioux ceded lands in South Dakota under section 13 of the Sioux act of March 2, 1889 (25 Stat., 888), have been relinquished and accepted, the Indians returning to the diminished reservations whereon are located the tribes to which they belong, where they will receive other allotments if found entitled thereto.

The total number of allotments to Indians during the fiscal year 1901 was 8,857, covering 1,125,970.80 acres. The total number made to Indians from the beginning, not including grants to and reservations for individual Indians and mixed bloods mentioned by name in various treaties, is 64,853, to whom 7,862,475.11 acres were allotted.

LEASING OF INDIAN LANDS.

ALLOTMENTS.—By an act of Congress approved February 28, 1891 (26 Stat., 794), provision was made for leasing allotments for farming or grazing for a term not exceeding three years, or ten years for mining purposes, when it should "be made to appear to the Secretary of the Interior that, by reason of age or other disability, any allottee

of Indian lands under the provisions of the said act or treaty can not personally and with benefit to himself occupy or improve his allotment or any part thereof," upon such terms, regulations, and conditions as shall be prescribed by the Secretary.

This provision was modified by the act of August 15, 1894 (28 Stat., 305), the term being extended to five years for farming or grazing, leasing for business purposes for a term of ten years being also authorized as well as for mining, and the word "inability" was inserted, and the law made to read "by reason of age, disability, or inability."

Further modification was made by the act of June 7, 1897 (30 Stat., 85), by omitting the word "inability" and changing the periods to three and five years, respectively.

By the act of March 1, 1899 (30 Stat., 941), the Indians of the Yakima Reservation were authorized to lease their allotted lands for agricultural purposes for not exceeding five years, and by the act of May 31, 1900 (31 Stat., 246), these Indians were authorized to lease "unimproved" allotted lands, for agricultural purposes, for any term not exceeding ten years, upon terms and conditions to be prescribed by the Secretary of the Interior.

Also by the same act (31 Stat., 229), the word "inability" was restored, and the term for farming leases extended to five years.

The leasing of allotments is therefore limited to three years for grazing and five for farming, mining, or business purposes, except as to the Yakimas, who may lease their "unimproved allotted" lands for agricultural purposes for "any term not exceeding ten years."

With the view of increasing the benefits to be derived by Indian allottees from the leasing of their lands, the Department, on July 16, 1900, determined that future leases should provide for some specific improvement, such as clearing and breaking of new land, erection of fences, barns, and other necessary permanent improvements, the character and value of which should be specifically stated in the lease; such substantial benefits being regarded as much more essential to the interests of the allottee than all money payment for rent would be.

Under date of January 4, 1901, the attention of the Indian Bureau was called to the fact that the majority of the leases executed under the above-mentioned provisions of law did not sufficiently show the disability of the Indian allottee or his inability to occupy or improve his allotment, and directions were given that all leases thereafter submitted for Department action should show clearly the nature and extent of the disability or inability of the Indian owner of the land; if from old age, the exact or approximate age and physical condition should be given, etc.

In view of the changes in the system of leasing, as indicated, the rules and regulations governing the same, approved September 22, 1894, were found to have become practically obsolete, and instructions were

given the Indian Office, under date of June 7, 1901, to formulate a set of new rules and regulations to conform generally to the lines followed by the Department in its action on leases during the eight or ten months immediately preceding that date.

Although the act of May 31, 1900, above referred to, permitted the leasing of the Yakima (unimproved) lands for the period of ten years, the Department has not heretofore deemed it advisable to approve such leases for more than five years; but in view of numerous applications for the ten-year leases—the applicants claiming that the long term was necessary because of great expense for clearing, fencing, irrigating, etc.—an inspector was directed to investigate the conditions on the Yakima Reservation and report as to the wisdom or necessity of long-term leases in these cases. His report (received since the end of the fiscal year) shows that leases of these lands for the maximum term provided by the act would not be advisable or beneficial to the Indians except in a few special cases. He recommended, however, that the Yakima lands be classified for leasing purposes, and this is now being done under authority of the Department.

Until within the last year, as previously indicated, it was almost impossible to obtain full facts upon which to determine the actual status of allottees whose lands were being leased, and many leases were made which doubtless should have been wholly rejected or the terms for which the leases were to run curtailed, many leases having been made for two and three year periods, and in some instances for five years. Under the present system, inaugurated more than a year ago, and the rules and regulations recently adopted for the government of the leasing of allotments the Department is more fully informed of the facts in each case presented, and consequently is better able to supervise and control where before action was necessarily taken with some doubt as to its propriety. But notwithstanding the limitations upon leasing allotments, it is felt that many allottees whose cases technically come within the provisions of the law as to "disability" and "inability" are permitted to lease who, being able, should, by strict construction of the law, be required to remain upon and work their allotments, as was evidently intended by Congress when it enacted the "general allotment act," under the terms of which most allotments have been made. By special legislation, however, the provisions of that act have been modified and the present system has grown up, in a measure putting a premium upon idleness, and in a good many instances an end to all industrial progress.

Many protests against the system have been received and more stringent rules recommended, to the end that able-bodied allottees shall be required to at least cultivate or make use for grazing of a portion of their allotments before being permitted to lease any part thereof.

The matter is now under consideration and further rules will be formulated, in future confining full leasing privileges to those whose "disability" or "inability," to be clearly and conclusively shown, actually disqualifies them from working any part of their allotments, and in a lesser degree to those whose "disability" or "inability," also to be fully and conclusively shown, may be such as to prevent them from working more than a small part of their allotments, such part to be regulated and determined by the actual conditions; all others to be required to work at least 40 acres of their allotments.

In the last two instances the allottees will be permitted to receive a portion or percentage of the income from the rental of their allotments, to enable them to make a start either in stock raising or agriculture and for general improvements, the remainder to be retained until the expiration of the lease period, when they will be better qualified to make proper use of the same.

The following table shows the extent of the leasing of allotments for the past year:

Agency.	Number of leases.	Kind of lease.	Rate per acre per annum.
Cheyenne and Arapaho	316	Farming and grazing	25 cents to $1.50.
Do	2	Business	$10 and $50 per annum.
Colville	6	Farming and grazing	About 37½ cents.
Crow Creek	23	Grazing	10 to 12½ cents.
Leech Lake	1	Business	$50 per annum.
Nez Percé	42	Farming and Grazing	25 cents to $2.66.
Omaha and Winnebago	494	do	25 cents to $2.50.
Do	1	School	$4 per annum.
Ponca, Pawnee, etc	235	Farming and grazing	20 cents to $2.50.
Do	3	Business	$10 to $30 per annum.
Pottawatomi, etc	69	Farming and grazing	75 cents to $3.
Puyallup	18	do	$1 to $16.50.
Round Valley	4	do	$1.50 to $2.50.
Sac and Fox	209	do	25 cents to $2.50.
Santee	18	do	25 to 62½ cents.
Southern Ute	3	Business	$40 to $110 per annum.
Yakima	22	Farming and grazing	50 cents to $2.
Yankton	117	do	10 to 22 cents.

TRIBAL OR UNALLOTTED LANDS.—Since the date of the last annual report 249 leases have been made and 6 permits granted for grazing, agricultural, and mining purposes, from which an approximate income, exclusive of the royalty on the mining leases, of $271,734.08 will be derived for the year, full details of which are set out in the report of the Commissioner of Indian Affairs.

LOGGING ON INDIAN RESERVATIONS.

CHIPPEWA INDIAN RESERVATIONS IN MINNESOTA.—In my last annual report the statement was made that the Department, on March 30, 1899, suspended logging operations on these reservations, and that no

logging had been carried on during the year following that date. On November 2, 1900, the above order was revoked and operations authorized on the said reservations under certain rules and regulations,[1] which were subsequently approved, together with a form of contract to be entered into by purchasers of logs.

Under this authority $11,949.52 was derived from timber cut from the Red Lake diminished reservation and $27,896.83 from the White Earth diminished reservation—in both cases after payment of the expenses of cutting.

On December 21, 1900, the above-mentioned order of suspension, which also covered operations on the ceded lands of the several Chippewa reservations in Minnesota, as well as the diminished reserves, was also revoked as to operations on the said ceded lands, and the rules and regulations adopted for the government of operations on the White Earth and Red Lake diminished reservations were extended thereto, and $87,340.27, after the payment of expenses, is reported to have been derived from these operations.

La Pointe Agency, Wis.—Logging operations on the Lac du Flambeau and Bad River reservations have progressed satisfactorily.

The act of February 12, 1901 (31 Stats., 785), authorizes the Indians of the Grand Portage Reservation to sell the timber from their allotments. The matter is now under consideration by the Commissioner of Indian Affairs.

Menomonee Reservation, Wis.—Under Department authority Menomonee Indians were employed to conduct logging on their reservation for the season 1900–1901. A total of 15,000,000 feet of timber was cut and the same sold, on sealed bids, at $13.25 per thousand feet.

Irrigation.

Of the appropriation of $50,000 for the fiscal year ended June 30, 1901, for irrigation, an aggregate of about $31,300 was expended on the San Ildefonso and other pueblos, and on the Southern Ute, Navajo, and Wind River reservations, the balance having been expended in repairs, maintenance, and ditch extension on various other reservations, and payment of the salaries of the employees engaged in irrigation work.

Southern Ute Reservation, Colo.—During the year earnest efforts have been made by the Department to provide a system of irrigation for the Indians occupying the diminished Southern Ute Reservation, in Colorado, and on the recommendation of Inspector Graves steps have been taken looking to the purchase of perpetual water rights for these Indians.

[1] Providing for the cutting and sale of dead pine, fallen or standing.

FORT HALL RESERVATION, IDAHO.—No settlement has been reached of the differences with the Idaho Canal Company, due to the alleged faulty construction of canals by them on the reservation, under contract, for the use of the Indians, but the Government is amply secured against any probable loss on this account. This matter has been carefully considered, but no satisfactory conclusion reached, owing to the absence of certain needed data, which is being sought, and upon its receipt further consideration will be given the matter.

CROW RESERVATION, MONT.—On this reservation work was continued on the construction of the Big Horn ditch, and very satisfactory progress made. The principal results accomplished were the completion of the main regulating weir or head gate, and the removal of the main obstacle to running water through the finished portions of the canal, viz, the Fort Smith cut, and it is expected that within the next few months the Big Horn Valley can be irrigated for a distance of 18 miles from the head of the ditch.

TELEPHONE AND TELEGRAPH LINES.—Permits have been granted certain companies to survey and locate routes for the construction of telephone lines over certain Indian reservations, under the provisions of section 3 of the act of March 3, 1901 (31 Stat., 1083), which authorizes the Secretary of the Interior to grant right of way—

> for the construction, operation, and maintenance of telephone and telegraph lines * * * through any Indian reservation, * * * through any lands reserved for an Indian agency or Indian school, * * * or through any lands which have been allotted in severalty to any individual Indian under any law or treaty, but which have not been conveyed to the allottee with full power of alienation, etc.

The following companies have received such permits, viz:

Snohomish River Boom Company, Tulalip Reservation.
E. F. Sparrow and R. W. Black, Osage Reservation.
Nebraska Telephone Company, Omaha, etc., Reservation.
Osage and Eastern, Osage Reservation.
F. H. Wright, Kiowa, etc., Reservation.
F. H. Wright, Indian Territory.
Arkansas Valley Telephone and Telegraph Company, Indian Territory.
Indianola Telephone and Telegraph Company, Indian Territory.
R. H. Hall, Indian Territory.
Indian Territory Telephone Company, Indian Territory.
J. G. Rucker, Indian Territory.
W. H. Gates, Indian Territory.

Maps of location of the following companies have received Department approval under the provisions of said section 3, viz:

Nebraska Telephone Company, Omaha, etc., Reservation.
Iron Range Electric Company, Fond du Lac and Chippewa reservations.
Indianola Telephone and Telegraph Company, Indian Territory.
Indian Territory Telephone Company, Indian Territory.
J. G. Rucker, Indian Territory.
W. H. Gates, Indian Territory.

RAILROADS ACROSS INDIAN LANDS.—Rights of way over Indian reservations and allotments and portions of the public domain in connection therewith have been granted to certain railway companies under the provisions of the act of March 3, 1875 (18 Stat., 482), and March 2, 1899 (30 Stat., 990), as follows:

Arkansas and Choctaw, Indian Territory.
Blackwell, Enid and Southwestern, Kiowa, Osage, and Kaw.
Chicago, Rock Island and Pacific, Indian Territory and Kiowa.
Choctaw, Oklahoma and Gulf, Indian Territory and Kiowa.
Columbia Valley, Washington.
Denison and Northern, Choctaw and Chickasaw.
Fort Smith and Western, Choctaw and Creek.
Gainesville, McAlester and St. Louis, Indian Territory.
Kansas, Oklahoma Central and Southwestern Railway Company, Indian Territory.
Kansas City, Mexico and Orient, Oklahoma (Kiowa).
Kansas City, Fort Scott and Memphis, Indian Territory.
Kiowa, Chickasha and Fort Smith Railway Company, Indian Territory.
Muscogee and Western, Oklahoma.
Minnesota and Manitoba, Red Lake.
Nevada, California and Oregon, California.
Oklahoma City and Western, Oklahoma and Chickasaw Nation.
Oregon Railway and Navigation Company, Oregon.
Ozark and Cherokee Central, Indian Territory.
Omaha and Northern, Omaha and Winnebago.
Poteau Valley Railway Company, Choctaw.
Republic and Kettle River, Colville.
Republic and Grand Forks, Colville.
Seattle-Tacoma and Interurban, Puyallup.
St. Paul, Minnesota and Manitoba, Colville.
Shawnee, Oklahoma and Missouri Coal and Railway Company, Indian Territory.
Sulphur Springs Company, Chickasaw.
Watonga and Northwestern, Oklahoma.
Western Oklahoma, Indian Territory.
Washington and Great Northern, Colville.

The following companies have been granted permits to survey and locate lines of road on Indian lands under the provisions of the aforesaid act of March 2, 1899, viz:

Missouri, Kansas and Texas (extension), Indian Territory.
Oklahoma City and Southeastern, Choctaw and Chickasaw.
Eastern Oklahoma, Oklahoma and Indian Territory.
North Arkansas and Western Railway Company, Indian Territory.
Gulf, Chickasaw and Kansas Railway Company, Indian Territory.
Kansas, Eastern Oklahoma and Texas Railroad Company, Indian Territory.
St. Louis and San Francisco Railroad Company, Indian Territory.

In addition to the above, maps have been approved showing additional station grounds for the following railroad companies:

Kansas, Oklahoma Central and Southwestern, Indian Territory.
St. Louis, Oklahoma and Southern, Indian Territory.
St. Louis and San Francisco, Indian Territory.

THE INDIAN TERRITORY UNDER THE CURTIS ACT AND OTHER LEGISLATION.

In 1866 treaties were made by the Government with each of the Five Civilized Tribes providing, among other things, for the continuance of their tribal governments under their respective constitutions and laws when not in conflict with the Constitution and laws of the United States. The supervision by the Government was exercised through its Indian agents appointed for the respective tribes.

By the act of March 3, 1871 (16 Stat., 566), it was declared -

> that no Indian nation or tribe within the territory of the United States shall be acknowledged or recognized as an independent nation, tribe, or power with whom the United States may contract by treaty, but no obligation or any treaty liability made and ratified with any such Indian nation or tribe prior to March 3, 1871, shall be hereby invalidated or impaired.

During the fiscal year ending June 30, 1874, the several agencies of the Five Civilized Tribes were consolidated into one union agency, which was located at Muscogee, in the Indian Territory.

On March 1, 1889, a United States court was established in said Territory, within certain limits specifically designated, and its jurisdiction was defined, excepting therefrom, however, all controversies between persons only of Indian blood (25 Stat., 783), and by the act of May 2, 1890 (26 Stat., 81), the Indian Territory was divided, and its boundaries, together with those of Oklahoma, were specially defined, and certain general laws of the State of Arkansas, designated by chapters, were put in force in the Indian Territory when not locally inapplicable or in conflict with existing law of the United States upon the subject-matter. This act also expressly declared that the Constitution and all general laws of the United States prohibiting crimes and misdemeanors within their exclusive jurisdiction, except in the District of Columbia, and the United States laws relating to banking associations shall have full force and effect in the Indian Territory, except that the courts of the Five Civilized Tribes shall have exclusive jurisdiction over all causes wherein members of the said nations are the sole parties, whether such parties are such members by virtue of treaty provisions, by blood relation, or by adoption.

Said act also guaranteed to said civilized tribes the right to punish their members for violations of tribal laws when said laws were not in conflict with the laws and treaties of the United States.

The jurisdiction of the United States courts was also extended to all controversies between Indians of different tribes, and provision was made for the appointment of United States commissioners, who were invested with all the powers of United States circuit court commissioners.

Notwithstanding the enlargement of the jurisdiction of the United States courts in the Indian Territory, the conditions therein continued to be unsatisfactory, and subsequent legislation was had with a view of remedying the defects and affording additional protection to the persons residing in said Territory.

The Dawes Commission.

Authority was given by section 16 of the Indian appropriation act of March 3, 1893 (27 Stat., 645), for the appointment of a commission by the President, with the advice and consent of the Senate, to consist of three members, to enter into negotiations with the Five Civilized Tribes "for the purpose of the extinguishment of the national or tribal title to any lands within that territory now held by any and all such nations or tribes, either by cession of the same or some part thereof to the United States, or by the allotment and division of the same in severalty among the Indians of said nations or tribes, respectively, as may be entitled to the same, or by such other method as may be agreed upon between the several nations or tribes aforesaid, or each of them, and the United States, with a view to such an adjustment, upon the basis of justice and equity, as may, with the consent of such nations or tribes of Indians, so far as may be necessary, be requisite and suitable to enable the ultimate creation of a State or States of the Union, which shall embrace the lands within said Indian Territory."

Said commission was duly appointed, and, by the appropriation act for sundry civil expenses of the Government approved March 2, 1895 (28 Stat., 939), the members thereof were increased to five.

The Indian appropriation act of June 10, 1896 (29 Stat., 339), directed said commission—

> to continue the exercise of the authority already conferred upon them by law, and endeavor to accomplish the objects heretofore prescribed to them, and report from time to time to Congress.

Authority was also given in said act for the commission to hear applications for citizenship in any of said nations and to determine the right of the applicants to be enrolled as members thereof. Said applicants were required to apply to the commission within three months after the passage of said act, and its decisions were to be rendered within ninety days after the applications were filed. A proviso to said act confirmed the rolls of citizenship of the Five Civilized Tribes as then existing, and any person claiming the right to be added to the rolls as a citizen of either of said tribes, whose right prior thereto had either been denied or not acted upon, was authorized to apply to the proper tribal authority to be admitted to citizenship; and said application was required to be determined within thirty days from the date of the same.

The commission was also authorized to administer oaths, issue process to compel the attendance of witnesses, and to send for persons and papers. The right of appeal was given to the tribe or any person who felt aggrieved at the decision of the tribal authorities or the commission to the United States district court within sixty days, and it was declared that the judgment of said court should be final.

The commission was also required by said act to cause a complete roll of citizenship of each of said nations to be made within six months, and to add to said roll the names of citizens whose right might be conferred under the provisions of said act, and it was declared that the rolls so made should be the rolls of citizenship of said nations or tribes, subject to the determination of said United States courts.

The commission was further directed to file lists of members as finally approved by it with the Commissioner of Indian Affairs, "to remain there for use as the final judgment of the duly constituted authorities."

It was also required to make a roll of freedmen entitled to citizenship in said tribes and to include their names with the lists of members to be filed with the Commissioner of Indian Affairs.

The act also declared it to be the duty of the United States—

to establish a government in the Indian Territory which will rectify the many inequalities and discriminations now existing in the Territory and afford needful protection to the lives and property of all citizens and residents thereof.

Under the Indian appropriation act approved June 7, 1897 (30 Stat., 83), said commission was directed to examine and report to Congress whether the Mississippi Choctaws were not entitled to all the rights of Choctaw citizenship, excepting the interest in the Choctaw annuities, under the treaties made with the United States.

The jurisdiction of the United States courts in the Indian Territory was further extended to all civil causes in law and equity thereafter instituted and all criminal causes for the punishment of any offense committed after January 1, 1898, by any person in the Indian Territory, and the jurisdiction of the United States commissioners under the existing laws was declared to extend to "all persons and property in said Territory."

The laws of the United States and the State of Arkansas in force in said Territory were declared to—

apply to all persons therein, irrespective of race, said courts exercising jurisdiction thereof as now conferred upon them in the control of like causes, and any citizen of any one of said tribes qualified who can speak and understand the English language may serve as a juror in any of said courts.

The commission was directed to continue to exercise the authority theretofore conferred upon it by law to negotiate with the Five Civilized Tribes, with a proviso that "the rolls of citizenship" referred

to in said act of June 10, 1896, "shall be construed to mean the last authenticated rolls of each tribe which have been approved by the council of the nation and the descendants of those appearing upon said rolls, and such additional names and their descendants as have been subsequently added, either by the council of said nation, the duly authorized courts thereof, or the commission, under the act of June 10, 1896."

It was also authorized to investigate all other names upon such rolls for a period of six months after the passage of said act.

Another important provision was made in said act, namely—

that on and after January first, eighteen hundred and ninety-eight, all acts, ordinances, and resolutions of the council of either of the aforesaid Five Tribes passed, shall be certified immediately upon their passage to the President of the United States and shall not take effect, if disapproved by him, or until thirty days after their passage: *Provided*, That this act shall not apply to resolutions for adjournment, or any acts or resolutions or ordinances in relation to negotiations with commissioners heretofore appointed to treat with said tribes.

Additional legislation was made by the act of June 28, 1898 (30 Stat., 495), entitled, "An act for the protection of the people of the Indian Territory, and for other purposes," commonly called the "Curtis Act."

Prior thereto the commission had made an agreement with the Choctaw and Chickasaw nations on April 23, 1897, known as the "Atoka agreement," which, with certain amendments, was ratified by section 29 of said act and was subsequently duly ratified by the Choctaw and Chickasaw nations.

An agreement was also made by the commission with the representatives of the Creek Nation on September 28, 1897, which, as amended, was confirmed by section 30 of the Curtis Act, but the Creek Nation refused to ratify the same.

It was expressly provided in the agreement contained in section 29 of the Curtis Act that the tribal governments, as modified therein, should be continued until March 4, 1906, and it is stated that said stipulation was made in the belief that said governments, as modified, will prove so satisfactory that there will be no desire for further change "until the lands now occupied by the Five Civilized Tribes shall, in the opinion of Congress, be prepared for admission as a State to the Union, but this provision shall not be construed to be in any respect an abdication by Congress of power at any time to make needful rules and regulations respecting said tribes."

The representatives of the Seminole Nation made an agreement with the commission, which was duly ratified by the act of Congress approved July 1, 1898. (30 Stat., 567.)

The Indian appropriation act of May 31, 1900 (31 Stat., 221, 236), contains the following provision:

That said commission shall continue to exercise all authority heretofore conferred on it by law. But it shall not receive, consider, or make any record of any application of any person for enrollment as a member of any tribe in Indian Territory who has not been a recognized citizen thereof, and duly and lawfully enrolled or admitted as such, and its refusal of such applications shall be final when approved by the Secretary of the Interior: *Provided*, That any Mississippi Choctaw duly identified as such by the United States Commission to the Five Civilized Tribes shall have the right, at any time prior to the approval of the final rolls of the Choctaws and Chickasaws by the Secretary of the Interior, to make settlement within the Choctaw-Chickasaw country, and on proof of the fact of bona fide settlement may be enrolled by the said United States commission and by the Secretary of the Interior as Choctaws entitled to allotment.

The Indian appropriation act of July 1, 1898 (30 Stat., 591), reduced the number of members of the Commission to the Five Civilized Tribes to four, and declared that it should continue to exercise all authority theretofore conferred on it by law.

Said act also contained a provision allowing appeals from the United States courts in the Indian Territory to the Supreme Court of the United States, by either party, in all citizenship cases and in all cases between either of the Five Civilized Tribes and the United States involving the constitutionality or validity of any legislation affecting citizenship or the allotment of lands in the Indian Territory, under the rules and regulations governing appeals to said court in other cases.

Under the provisions of the Curtis Act the commission was required, among other things, to make correct rolls of citizenship of the members of said nations, including the freedmen, and, upon the completion of the roll of citizenship of any one of the nations, it was required to allot the exclusive use and occupancy of the surface of the land susceptible of allotment to the members appearing upon said roll, "giving to each, so far as possible, his fair and equal share thereof, considering the nature and fertility of the soil, location, and value of same."

By the terms of the agreement in section 29 of said act it was declared that all the lands within the Indian Territory belonging to the Choctaw and Chickasaw nations shall be allotted to the members of said tribe so as to give to each member, as far as possible, a fair and equal share thereof, considering the character and fertility of the soil and the location and value of the land, but the coal and asphalt "in or under the lands allotted" were reserved from allotment.

Appropriations have been made for the expenses of the commission from time to time, and its report for the fiscal year ending June 30, 1901, gives an exhaustive account of its work, the magnitude thereof, and the difficulties to be overcome in its execution.

The expenses and work of the commission have probably reached their maximum during the past fiscal year, and while a great deal has been accomplished in the matter of the preparation of the rolls and the allotment of the lands, yet there still remains much to be accomplished before the tribal governments shall finally be dissolved and the lands thereof "be prepared for admission as a State to the Union."

On March 18, 1900, an agreement was entered into with the representatives of the Creek Nation, which, with certain amendments, was ratified by the act of March 1, 1901 (31 Stat., 861), and said agreement as amended was ratified by the Creek council on May 25, 1901, with the exception of section 36 thereof, and the same was duly proclaimed on June 25, 1901.

The agreement entered into with the representatives of the Cherokee Nation on April 9, 1900, as amended was ratified by the act of March 1, 1901 (31 Stat., 848), but was defeated by the Cherokee Nation on April 29, 1901. Afterwards the Cherokee council passed an act providing for the appointment of another commission to further negotiate with the Commission to the Five Civilized Tribes, which act, on account of the previous action of the Cherokee Nation, was sent to the President with an adverse recommendation and was disapproved by him on June 11, 1901.

The agreement, contained in section 29 of the Curtis Act, with the Choctaws and Chickasaws has been found to be imperfect and ambiguous and does not cover all the matters which should be provided for by law. On February 7, 1901, the commission entered into an agreement with the representatives of said nations for the purpose of fixing a date after which no names should be added to the rolls of the Choctaw and Chickasaw nations, and on February 23, 1901, the original agreement and an amended agreement were submitted to Congress, which, with departmental letter submitting the same, are contained in House Document No. 495, Fifty-sixth Congress, second session, but said agreement was not confirmed by Congress.

On August 5, 1901, the Department authorized the commission to enter into another agreement with the representatives of said nations looking to the closing of the rolls and relating to other matters necessary to a final adjudication of the private and public interests.

Authority has also been given to said commission to enter into a supplemental agreement with the Creek Nation with a view to remedying certain defects found in the agreement ratified on May 25, 1901, and it is believed that the agreements making the necessary changes relative to the affairs of said nations will soon be completed.

During the fiscal year ending June 30, 1901, the commission has been engaged in hearing applications for enrollment, making classifications of the lands of the several tribes, allotting the lands to the Seminoles, granting selection certificates to members of the Creek

Nation, and making the necessary surveys of the lands of the several tribes.

The number of persons listed for enrollment is as follows:

Citizens by blood and intermarriage, including names of new-born children, in the Choctaw Nation	20,874	
Freedmen	3,981	
		24,855
Citizens by blood and intermarriage, including names of new-born children, in the Chickasaw Nation	7,493	
Freedmen	5,560	
		13,053
Citizens by blood and intermarriage, including names of new-born children, in the Cherokee Nation	25,361	
Freedmen	3,150	
		28,511
Citizens by blood and intermarriage, including names of new-born children, in the Creek Nation	10,026	
Freedmen	5,151	
		15,177
Number of names on approved Seminole roll		2,757
Total		84,353

The number of acres classified is as follows:

Creek Nation	3,072,813.16
Cherokee Nation	4,420,070.13
Chickasaw Nation	4,703,108.05
Choctaw Nation	6,950,043.66
Seminole Nation (previously reported)	365,854.39
Total	19,511,889.39

Although the work of enrolling citizens has been somewhat delayed, the commission reports that commendable progress has been made in the Creek and Cherokee nations.

In the Creek Nation it has been found impossible to close the rolls until a date shall be fixed after which the children born to parents who are citizens of the nation should not be added, and also until further provision is made regulating the disposition of the lands of citizens entitled to enrollment who shall have died before allotment is made.

It appears that practically all the citizens of the Creek Nation whose names are found upon the last authenticated rolls of that tribe are listed for enrollment, and it is now only required to ascertain the names of those to be stricken from and those to be added to the rolls on account of births and deaths under the ratified agreement above referred to.

Since April, 1899, when applications were received for preliminary allotments by the Creeks, 10,617 persons have made application to select allotments, of which number 9,557 have received preliminary allotments of 160 acres and 1,060 have made partial selections; and

the selections up to and including June 30, 1901, include an area of 1,626,917 acres.

It appears that applications for enrollment as citizens of the Cherokee Nation, including Indians and freedmen, have been heard by the commission during the past year, and that progress has been necessarily slow on account of the large number of applicants and witnesses and the great volume of testimony which must be received and considered.

Reference is made by the commission to the fact that in the case of the Cherokee freedmen the testimony concerning their right to enrollment covers a period of forty years.

Concerning the enrollment of the Choctaws and Chickasaws, less progress has been made during the past year than at any other time previous. The commission states that this is due to the fact that no time has been fixed for the closing of the rolls of those tribes, and until that is done the names of children born to citizens must be added and the names of citizens who have died must be stricken from the records of the commission; that, with the exception of the determination of the claims of Mississippi Choctaws, the final rolls of Choctaw citizens, whether by blood, intermarriage, or adoption, can be completed within a comparatively short time from the date fixed for closing the rolls.

It has been very difficult to identify the Mississippi Choctaws, as required by section 21 of the Curtis Act, because more than seventy years have passed since the date of the treaty of September 27, 1830. It is therefore recommended that legislative action be taken by Congress which will more accurately define the persons who may be entitled to the benefits under said treaty and also to prescribe more definitely the method and manner of identifying such persons.

The suggestion is made that until this be done the rolls of the Choctaw and Chickasaw nations can not be finally closed.

The classification of the lands and the estimation of timber in the Indian Territory have been completed by the commission during the past fiscal year, on account of which the employees in the field have been reduced some 230, thereby lessening salaries and expenses by nearly $30,000 per month.

The lands of the several tribes have been divided according to classes or grades, and the valuations of the same will be made by the commission, when the location and proximity of the lands to market will also be taken into consideration.

The commission has allotted nearly all of the lands in the Seminole Nation, giving to each Seminole lands valued approximately at $300.

The commission has recommended reservations for town-site purposes, under the provisions of the act of May 31, 1900, at 21 towns in

the Creek Nation, along certain railways, and at 10 towns in the Chickasaw Nation.

Since the magnitude of the work to be done by the Government in the Indian Territory has been made known to the public less dissatisfaction has been shown on account of the apparently slow progress made by the commission.

Agreements have been made with all of the tribes, and the same have been ratified, except by the Cherokees, and it is believed that the necessary supplemental agreements will be speedily made and ratified, so that the work of the commission can be fully completed as soon as possible consistent with economy and efficiency.

The validity of the Curtis Act has been affirmed by the judicial tribunals, notably in the case of Maxey *v.* Wright (54 S. W. Rep., 807), and by the Supreme Court in Stephens *v.* The Cherokee Nation (174 U. S., 445).

The legislation concerning the Dawes Commission was intended to create and direct its administration through the Department of the Interior, so that as speedily as possible the unsatisfactory condition of affairs among the Five Civilized Tribes should be changed, and that a complete enrollment of the members of each tribe should be made and its property distributed upon a basis of equal value to the duly recognized members of the tribe.

The Department fully recognizes the difficulties that have been met, on account of which the commission has not yet accomplished the purpose of Congress as indicated in said legislation, and it is evident that according to the rate of progress hitherto made it will be many years before the work can be completed. It has also been demonstrated that a large number of persons, including white men and Indians, will in the future, as in the past, seek to prevent an early and final settlement of the affairs of said nations, in order to advance their own political, personal, and financial interests.

The first commission was created in 1893, and, with certain changes, has continued for nearly nine years, during which time its total expenses have been $842,027.51, or an average per annum of $93,558.61, being at the rate of $9.96 per head, men, women, and children, of the number of Indian citizens, including freedmen, estimated to be 84,507.

As heretofore stated, the rolls of only one nation, viz, the Seminole, have been approved, and their lands have not yet been entirely allotted. The enrollment of the four remaining tribes has not been completed, and the time can not be fixed with any degree of certainty when such enrollment will be finished. While the lands of said tribes have been classified, yet the value of each tract has not been given, and this must be done before the lands can be allotted to the members upon a basis of value.

The requirement that the lands must be allotted upon the basis of value, in my judgment, is entirely impracticable, for the reason that the determination of said value must necessarily be from the indications of the surface without any knowledge of or regard for the mineral which may be hidden beneath the surface. It is a well-known fact that the Indians themselves prefer, because of the association and other influences, lands of their own selection, even though the same shall be of unequal value.

There is a vast amount of labor yet to be performed by the commission in investigating the claims of applicants for enrollment and in equalizing the value of the lands already classified, all of which will require a great deal of work in the field and at the offices of the commission, and this can not possibly be accomplished within a reasonable time by the present members of the commission, and each year's delay only increases the temptation which the continuation of the existing state of affairs will offer to the unscrupulous speculator who fully realizes the opportunities of the prize thus offered. Therefore in order to accomplish the real purpose of the act creating the Dawes Commission, namely, the complete enrollment of the legal members of said tribes, and the proper distribution of their assets, I urgently recommend that said commission be increased by four members; that a modification be made of the law which requires the lands to be distributed upon a basis of equalized valuation, and that a definite period be fixed for the completion of all the work pertaining to the allotment of lands, etc., among the Indians in the Territory.

The commission's report is hereto appended, page 185, marked "Exhibit A."

Inspector for the Indian Territory.

Section 27 of the Curtis Act authorized the Secretary of the Interior to locate one Indian inspector in the Indian Territory—

who may, under his authority and direction, perform any duties required of the Secretary of the Interior by law relating to affairs therein.

The third annual report of the United States Indian inspector for the Indian Territory, Mr. J. George Wright, gives in detail the work accomplished under his supervision during the past fiscal year.

On August 17, 1898, said inspector was directed to establish his headquarters at Muscogee and to assume a general supervision over the affairs of the Union Agency and such other matters requiring action by the Department, except those requiring the action of the Commission to the Five Civilized Tribes. The superintendent of schools, the revenue inspectors, and the town-site commissions report through the inspector, who makes such recommendations as he deems proper to the Department through the Commissioner of Indian Affairs.

According to the Twelfth Census of the United States, the population in the Indian Territory is as follows:

Seminole Nation	3,786
Creek Nation	40,674
Cherokee Nation	101,754
Choctaw Nation	99,681
Chickasaw Nation	139,260
Total, Five Civilized Tribes	385,155
Quapaw, Seneca, etc	6,805
Total for the Territory	391,960

and that of this number about 84,000 are thought to be members of the Five Civilized Tribes, as shown by the annexed table:

Tribe.	Population.	Total.
Choctaw	16,000	
Choctaw freedmen	4,250	20,250
Chickasaw	6,000	
Chickasaw freedmen	5,500	11,500
Creek	10,000	
Creek freedmen	5,000	15,000
Cherokee	31,000	
Cherokee freedmen	4,000	35,000
Seminole		2,757
Total		84,507

The report of the inspector shows that nothing has arisen in the Seminole Nation requiring special attention from him except some investigations concerning the illegal grazing and holding of cattle within its limits by noncitizens.

Mr. Charles D. Carter was appointed trustee for the Chickasaw Nation, in place of Mr. L. C. Burris, whose term had expired. Mr. Luke W. Bryan, the mine inspector for the Indian Territory, has rendered the inspector valuable assistance during the past year.

There has been an increase in the production of coal in the Choctaw Nation during the past year, as shown by the following statement:

	Tons.
July 1, 1898, to June 30, 1899	1,404,442
July 1, 1899, to June 30, 1900	1,900,127
July 1, 1900, to June 30, 1901	2,398,156

Attention is called to the fact that on account of the requirements in the present form of lease that applicants must furnish satisfactory evidence of good faith, financial ability, and experience in mining operations, the number of applications for speculative purposes has largely decreased during the past year.

The following table shows the coal leases approved by the Department in the Choctaw Nation:

Name.	Number.	Date of approval.
During the fiscal year ended June 30, 1899:		
Choctaw, Oklahoma and Gulf Rwy	30	Mar. 1, 1899
John F. McMurray	8	Apr. 27, 1899
During the fiscal year ended June 30, 1900:		
D. Edwards & Son	3	Aug. 22, 1899
McKenna, Amos & Amos (since canceled)	1	Oct. 24, 1899
McAlester Coal Mining Co	2	Feb. 19, 1900
Choctaw Coal and Mining Co	3	May 4, 1900
Sans Bois Coal Co	6	June 25, 1900
During the fiscal year ended June 30, 1901:		
Central Coal and Coke Co. (since canceled)	1	Aug. 27, 1900
William Busby	1	Sept. 6, 1900
Samples Coal and Mining Co	1	Oct. 4, 1900
McAlester-Galveston Coal Mining Co	1	Oct. 18, 1900
H. Newton McEvers	1	Do.
Degnan & McConnell	3	Nov. 16, 1900
Folsom-Morris Coal Mining Co	1	Nov. 22, 1900
Ozark Coal and Rwy. Co	1	Dec. 8, 1900
St. Louis-Galveston Coal Mining Co	2	Jan. 14, 1901
Missouri, Kansas and Texas Coal Co	1	Feb. 12, 1901
Osage Coal and Mining Co	7	May 7, 1901
Atoka Coal and Mining Co	7	Do.
Devlin-Wear Coal Co	1	June 17, 1901
Total number leases	81	

Two of said leases have been canceled on account of the failure of the lessees to profitably operate their leases.

The following parties are operating their mines under national contracts, viz:

Kansas and Texas Coal Company.
Southwestern Coal and Improvement Company.
Hailey Coal and Mining Company.
Turkey Creek Coal Company.
Capital Coal and Mining Company.
J. B. McDougall.
M. Perona.
R. Sarils.
Perry Brothers.
Caston Coal Company.

A limited amount of coal has been mined for local consumption by some other small operators under informal permits granted by direction of the Department.

The royalty of 8 cents per ton on 2,000 pounds mine run, fixed by the Department to take effect March 1, 1900, has not been changed during the past year, and royalties have been collected at that rate.

No change has been made in the rate of royalty on asphaltum, which is 60 cents per ton on refined and 10 cents per ton on crude.

The following table shows the asphalt leases approved during the years ending June 30, 1900, and June 30, 1901:

Name.	Number.	Date of approval.
During the fiscal year ended June 30, 1900:		
Brunswick Asphalt Co	1	Mar. 20, 1900
Caddo Asphalt Co	1	Apr. 21, 1900
Elk Asphalt Co	1	May 3, 1900
During the fiscal year ended June 30, 1901:		
Downard Asphalt Co	1	Oct. 18, 1900
M. & A. Schneider	1	Nov. 23, 1900
Tar Spring Asphalt Co	1	May 13, 1901

One or two other companies claiming to be operating under tribal charters and contracts have mined to a very limited extent during the past year.

Attention is also called to the fact that the Department has declined to approve any further applications for mining asphalt, on account of the undeveloped state of the asphalt industry, and has given authority to the inspector to grant informal permits to parties desiring to mine asphalt, thereby encouraging competition and not limiting the mining to any particular individual or company.

The amount of royalty from coal is reported to be $198,449.35 and from asphalt $1,214.20, or a total of $199,663.55.

A comparative statement is given, showing the different accounts collected for the previous years, as follows:

From July 1, 1898, to June 30, 1899	$110,145.25
From July 1, 1899, to June 30, 1900	138,486.40
From July 1, 1900, to June 30, 1901	199,663.55

It appears that there are now 79 approved coal leases in effect and 6 asphalt leases, making a total of 85, and that there are 10 operators still mining under national and tribal contracts.

The royalties derived from coal and asphalt in the Choctaw and Chickasaw nations are placed to the credit of said tribes in their proportionate shares, to be used for the education of the children of Indian blood of the members of the tribes, as shall be necessary.

No mineral leases have been made for lands in the Creek Nation under the provisions of the Curtis Act, but informal permits have been granted to several parties to strip coal in small quantities on the prospective allotments selected by Indians with their consent, and the coal royalty collected at the rate of 8 cents per ton amounted during the fiscal year to $4,128.22, showing an increase of $1,104.95 over the amount collected for the previous year, which was $3,023.27.

Since the ratification of the recent agreement with the Creek Nation all coal permits theretofore issued in the Creek Nation have been revoked.

No application for mineral lease in the Cherokee Nation has been received or approved during the past year; but certain informal permits have been granted to mine coal in the Cherokee Nation the same as in the Creek Nation, and the amount of royalty, at 8 cents per ton, collected is $6,326.87, being an increase of $2,470.86 over the amount paid during the previous year, which was $3,856.01.

Satisfactory progress has been made in the surveying and laying out of town sites under the provisions of the Curtis Act, and also the Indian appropriation act of May 31, 1900 (31 Stat., 221), which contains the provision that "the Secretary of the Interior is hereby authorized, under rules and regulations to be prescribed by him, to survey, lay out, and plat into town lots, streets, alleys, and parks the sites of such towns and villages in the Choctaw, Chickasaw, Creek, and Cherokee nations as may at that time have a population of two hundred or more, in such manner as will best subserve the then present needs and the reasonable prospective growth of such towns."

There are also certain other provisions in said act authorizing the Secretary of the Interior, upon the recommendation of the Commission to the Five Civilized Tribes, to set aside new town sites along the lines of railroads which shall be constructed or in process of construction through the Territory, and also to authorize the surveying and platting of town sites by contract, and to grant the permission to the authorities of any town to survey and plat its own town site at the expense of the town, subject to the supervision and approval of the Department.

Under said provisions relative to reserving land for town-site purposes along the lines of railroads the Department has segregated during the year town sites at 8 stations in the Creek Nation and 10 in the Chickasaw Nation, along the line of the St. Louis, Oklahoma and Southern Railway, which extends from Sapulpa, Creek Nation, to Denison, Tex.

The names of the towns in the various nations whose exterior limits have been established are given, showing 25 in the Choctaw Nation, 42 in the Chickasaw Nation, 8 in the Creek Nation, and 29 in the Cherokee Nation, and one town in each of the Choctaw and Chickasaw nations whose exterior limits are yet to be fixed.

The cost of surveying and platting town sites has been, on an average, about $3.50 per acre, and the expense per acre in the future will probably be less on account of the experience which the surveying parties have had.

The efforts on the part of towns to survey and plat their own town sites, under the provisions of the act of May 31, 1900, have not been satisfactory, and the work has had to be done over again by the Government officers; the plats of only four towns in the Choctaw Nation

made by the town-site authorities have been approved by the Department.

Attention is called to the difficulty of collecting the tribal revenues of the respective nations on account of the refusal of the noncitizens to pay the taxes in accordance with the tribal laws and the regulations of this Department.

The revenues of the Choctaw and Chickasaw nations are collected by the tribal authorities, except the royalties on coal and asphalt and for timber cut for railroads and mines.

The Department has been requested by the chief executives of said nations from time to time to remove persons refusing to pay the tribal taxes under the provisions of sections 2147 to 2150, inclusive, Revised Statutes, and such persons have been removed.

The revenues in the Creek Nation are collected and disbursed by the United States authorities, and the right to collect such taxes has been sustained by the judicial tribunals of the Territory and the United States court of appeals in the case of Maxey *v.* Wright (54 S. W. Reporter, 807).

The total amount of revenue collected from all sources in the Creek Nation during the past year is $30,827.60. The expenses of the United States revenue inspector, which are paid from said sum, were $4,230.80, and exchange was $52.32, leaving $26,544.46 to the credit of the nation.

The comparative statement furnished shows a material increase in the net amount to the credit of the nation.

The recent agreement with the Creeks, ratified on May 25, 1901, does not change the tribal tax laws of said nation except that no permit tax is required from noncitizens for the privilege of renting lands for agricultural purposes, nor is a tax required upon cattle regularly grazed by Creek citizens upon their selections.

In the Cherokee Nation no revenue has been collected from Cherokee citizens carrying on a mercantile business in said nation on account of the decision in the United States court enjoining the officials from collecting said tax.

The total amount of revenue collected for the Cherokee Nation is $19,392.65; the expenses of the revenue inspector for said nation, which are also paid from the amount collected, are $4,038.34, which, with $37.13 paid for exchange, leaves a net balance of $15,317.18 to the credit of the nation, which is a net increase of $1,695.14 over the amount collected for the previous year.

Attention is called to the report of Mr. John D. Benedict, superintendent of schools in said Territory, and also to the reports of the supervisors for the Choctaw, Cherokee, and Creek nations, submitted with his report.

According to the report of the superintendent of schools, the schools have been maintained in the Choctaw Nation satisfactorily during the

past year, and the boarding schools will compare favorably with the average high school in the States; that much progress has been made in manual training and industrial work, and the enlarged attendance in the boarding and neighborhood schools shows the increased interest in educational matters.

There are 5 boarding schools or academies in the Choctaw Nation, 2 of which are orphan academies, whose pupils remain the entire year. The term is nine months, and there have been enrolled 525 pupils, with an average attendance of 430 and a cost of $58,469.84, or $135.98 per capita. For the same time there were 161 neighborhood or day schools, with 2,879 pupils, average attendance of 1,924 and a total cost of $34,391.02, or $17.87 per capita. Besides said day schools, 305 Choctaw pupils attended day schools in the Chickasaw Nation, for whom teachers were paid $2 per month, making a total expenditure for Choctaw pupils residing in the Chickasaw Nation of $3,147.70, showing a total cost of $96,008.56; whole number of pupils, 3,709; average attendance, 2,555 in the Choctaw Nation.

In the Chickasaw Nation the schools have been maintained from the funds other than the royalties on coal and asphalt. On April 11, 1901, an agreement was made with the tribal authorities whereby the funds that have accrued from the royalties on coal and asphalt should be applied to the indebtedness incurred on account of the support of the schools.

No figures are given of the cost of the schools of the Chickasaw Nation during the past fiscal year, the number of pupils, nor the average attendance. It is believed, however, that under the agreement above referred to, the proper supervision will be exercised over the appointment of teachers and the disbursement of funds, and the schools will become more efficient in the future.

During the past year the Creek Nation has supported 9 boarding schools, 6 for Indian children and 3 for children of freedmen; 64 neighborhood schools, 41 for Indian and 23 for colored children. In the 9 boarding schools there were 591 pupils; average attendance, 450; total cost, $50,470.40, or $112.16 per capita. In the neighborhood schools there were enrolled 2,070 pupils, an average attendance of 957 and a total cost of $17,788.28, or $18.58 per capita, making a total enrollment of 2,661 pupils, average attendance of 1,407, and total cost of $68,258.68.

There have been in the Cherokee Nation during the past year 3 boarding schools and 1 colored high school. The number of pupils has been 686; average attendance, 455; total cost, $48,275, or $106.10 per capita. During seven months of the year there have been 124 neighborhood or day schools with 4,153 pupils, average attendance of 2,356, cost $34,460, or $14.63 per capita, making the whole number of pupils 4,839, average attendance 2,811, and the whole cost $82,735.

Attention is also called to the provision of the agreement with the Creek Nation ratified by act of March 1, 1901, and duly proclaimed to be in effect, subject to section 36 thereof, by the proclamation of the President dated June 25, 1901.

Special reference is made to the town-site provisions of said act, and it is stated that the towns of Muscogee and Wagoner were being disposed of in accordance with the terms of said agreement.

Attention is also called to section 42 of the agreement excepting the general appropriation acts for the necessary incidental and salaried expenses of the Creek Nation from the requirement relative to the approval of the acts of the nation by the President.

A list is given of the contracts under the regulations promulgated in accordance with the provisions of the act approved June 6, 1900 (31 Stat., 660), entitled "An act to provide for the use of timber and stone for domestic and industrial purposes in the Indian Territory," and under said regulations Indian citizens are permitted, when in possession of their pro rata share of the lands of the tribe or prospective allotment, to sell and dispose of timber cut in such clearing, as stove wood or cord wood, to any person requiring same for domestic purposes in said Territory when such timber is cut in clearing the land for cultivation in good faith.

The cutting of timber under said regulations has been restricted by the Department to timber required for props and caps for mines, and for ties, bridge timber, and piling for railroads.

These regulations are still in force except as to the allotted lands in the Creek Nation, upon which the cutting of timber is regulated by section 38 of said agreement with the nation.

The total amount of receipts is shown by the report of the Indian agent to be $286,514.02, being an increase over the amount collected the previous year of $89,959.80.

The disbursements of the United States Indian agent, including the payments of the semiannual interest funds of the Creek and Cherokee nations, were as follows:

Warrant payments, Creek	$138,788.93
Warrant payments, Choctaw, general	4,130.78
Warrant payments, Choctaw school certificates	607.70
Schools, Choctaw	57,278.33
Town sites	37,263.08
Smallpox	41,328.56
Office, incidental	23,924.18
Creek indigents	828.00
Paid exchange	142.96
Total	304,292.52

Attention is called to the fact that the Cherokees have an outstanding indebtedness under their general fund of from $700,000 to $800,000;

that the receipts of the nation are not sufficient to meet the annual tribal expenditure and to pay the interest on said outstanding indebtedness. It is recommended that legislative action be had permitting the withdrawal of a sufficient amount of the funds of the nation to take up said indebtedness, which draws interest at 6 per cent, while the interest paid to the nation by the Government is only 5 per cent.

It appears that the interest from the funds of the Creek Nation, together with the revenues collected for its benefit, are sufficient to pay the current expenses of its tribal government.

Reference is made to the report of the Indian agent concerning the adjudication of the Chickasaw incompetent claims under the provision of said Indian appropriation act of May 31, 1900. There have been filed in his office 243 claims, aggregating in amount the sum of $180,000. He has reported adversely upon all of said claims on account of the failure of the applicants to furnish satisfactory proof in support of their applications, and his recommendations have been confirmed by the Department.

The expenses of the governments of four of the Five Civilized Tribes are given, as follows:

Creek Nation:	
Appropriations for general officers and expenses	$10,450.00
For one regular and one special session of council	32,413.70
Total	42,863.70
Cherokee Nation:	
General officers and expenses	6,480.00
One regular and one special session of council	19,077.70
Expenses of elections	3,759.70
Total	29,317.40
Choctaw Nation:	
General officers, including tribal courts, etc	67,000.00
One regular and one special session of council	12,000.00
Total	79,000.00
Chickasaw Nation:	
General officers and expenses	25,000.00
Legislature	6,000.00
Total	31,000.00

Attention is called to the so-called "Snake uprising" of certain full-blood Creek Indians, known as the Snake Band, during the winter of 1900–1901. Said band, of which Chitto Harjo was the leader, elected a principal chief and other tribal officers and attempted to establish a Creek tribal government in opposition to the one recognized by the United States. On account of the hostile attitude of said Indians

warrants were issued for their arrest, and a troop of United States cavalry was ordered to assist the civil authorities in the execution of said warrants. The Indians were arraigned before the United States court in Muscogee and plead guilty to the charge of conspiracy, and upon taking oath to obey the laws of the United States and to recognize the established government of the Creek Nation and also to keep the peace they were paroled by the court during good behavior. This action caused said organization to disband and no further trouble from said Indians is apprehended.

Telephone and telegraph lines have been established in the Indian Territory, the names of which are set out in a list hereinbefore inserted.

The most necessary and important work to be done in the Indian Territory at the present time by the Government is to allot the lands in severalty to the citizens of the several tribes, so as to finally wind up their affairs. It is suggested that there should be additional legislation, if necessary, providing for a simpler manner of allotments of the lands than that under existing agreements with the several tribes.

A recommendation is renewed relative to the payment of the outstanding indebtedness of the Cherokee Nation by withdrawing from the United States Treasury a sufficient amount of their funds for that purpose.

It is suggested that 30 feet along each side of section lines be reserved from allotment for roads in the Indian Territory.

Under the provisions of the recent agreement with the Creek Indians the Indian agent is required to remove objectionable persons from allotments and to place allottees in possession of their land.

It is recommended that the compensation of the Indian policemen be fixed at $75 per month for the captain and $50 per month for the privates, together with their necessary traveling expenses.

It is shown that the relations between the tribal authorities and the Department are more satisfactory than heretofore, especially where conferences have been had with the executives of the nations by the officials of the Department.

Provision was made in the Indian appropriation act approved March 3, 1901 (31 Stat., 1058), making an appropriation of $5,000 to enable the Secretary of the Interior to investigate and report to Congress at its next session whether it is practicable to provide a system of taxation of personal property, occupations, franchises, etc., in the Indian Territory sufficient for maintaining a system of free schools for all the children of said Territory.

A special agent has been appointed to secure the necessary information, and a report to Congress will be made as soon as the same is obtained.

Commissions.

The Crow, Flathead, etc., Commission was engaged negotiating with the Yakima and Flathead Indians during a portion of the past fiscal year, but failed to conclude agreements with them. During the remainder of that year a part of the commission was engaged in special work in the field, under the provisions of the act of June 6, 1900 (31 Stat., 302), which required the members of the commission to perform such duties as the Secretary of the Interior might direct.

During its existence, about five years, this commission has negotiated three agreements with Indian tribes—one each with the Uinta Utes, Crows, and the Indians on the Fort Hall Reservation—the latter alone having been ratified by Congress, leaving the others pending before that body.

Puyallup Commission.—This commission, originally created by the act of March 3, 1893 (27 Stat., 633), is still engaged in the sale of the allotted and common or tribal lands of the Puyallup Indians. More sales were made during the last than in any previous year. A reappraisement of some of the common lands has been authorized, it appearing that the original valuation was too low.

Agreements with Indians.

Grande Ronde Reservation, Oreg.—An agreement with the Indians of this reservation was concluded June 27, 1901, by which they cede the surplus lands, 25,791 acres, for $28,000 in cash, the shares of adults to be paid within one hundred and twenty days after ratification of the agreement and the shares of minors as they arrive at the age of 18 years.

Lower Brule Reservation, S. Dak.—On May 6, 1901, an agreement was concluded with the Indians of this reservation, they having indicated their desire to cede certain of their surplus lands, by which 56,560 acres were acquired for a consideration of $70,700, to be expended in young cattle for issue to the Indians and in the construction of a fence around the reserve.

Rosebud Reservation, S. Dak.—That portion of the surplus lands of this reservation lying in Gregory County, S. Dak., was ceded by the Rosebud Indians by an agreement dated September 14, 1901, the Government acquiring 416,000 acres, for which $1,040,000 was agreed to be paid, part in cash, in installments, and the remainder to be expended for stock cattle for issue to the Indians of the reservation.

These agreements, all of which were negotiated through an Indian inspector, under the provisions of the act of March 31, 1901 (31 Stats.,

1077), will be submitted to Congress, in accordance with the requirements of that act.

KLAMATH BOUNDARY CLAIM.—An agreement was concluded by an Indian inspector with these Indians in 1900 in which provision was made for compensating them for certain lands in dispute, which was submitted to Congress for its action. Discrepancy was found therein in describing the lands ceded, and it was deemed necessary that the same should be resubmitted to the Indians to be corrected. This has been done and a new agreement obtained, which will be transmitted to Congress at its next session.

By this agreement the Government acquires title to 621,824 acres of land which it has practically had possession of for many years owing to an alleged erroneous survey, for which the Indians are to receive a gross sum of $537,007.20, a portion of which is to be placed to their credit in the Treasury at 5 per cent interest, and the balance to be paid in cash and expended for their benefit.

YAKIMA BOUNDARY CLAIM.—The claim for compensation for lands excluded from the Yakima Reservation by alleged erroneous survey, involving some 293,837 acres, is still pending, the Indians having refused to negotiate with an Indian inspector who was sent there for the purpose during the present year.

CONDITION OF INDIANS AND THEIR RESERVATIONS.—Investigations have been made by a special agent of the Department of the Mescalero, Uinta, Grande Ronde, Walker River, Pyramid Lake, Quinaielt, Siletz, Flathead, Shoshone, Devils Lake, Fort Peck, and Fort Berthold Indian reservations under the provisions of the act approved March 3, 1900 (31 Stat., 1069), which authorized the Secretary of the Interior—

to investigate and report upon the condition of Indians upon reservations, their degree of civilization, the advisability of reducing the size of their reservations, etc.

These investigations will be continued until information of the character contemplated by the law shall have been obtained of all reservations.

SALE OF INDIAN LANDS.

PEORIA AND MIAMI INDIANS.—Since my last annual report conveyances have been approved by the Department for 920.68 acres of Peoria lands, at a valuation of $14,868, and 700 acres of Miami lands, valued at $7,820.

CITIZEN POTAWATOMI AND ABSENTEE SHAWNEE LANDS.—Conveyances for 24,371.65 acres of Citizen Potawatomi Indian lands, having a value of $122,945.18, and for 4,309.61 acres of Absentee Shawnee lands, valued at $36,833.88, were approved by the Department during the same period.

INDIANS IN MICHIGAN.—Lands belonging to Indians in Michigan to the extent of 972.14 acres, valued at $5,135, were sold and conveyances therefor approved by the Department during the past year.

NORTHERN CHEYENNE INDIAN RESERVATION, MONT.—The claims of white settlers on that reservation for certain lands and improvements provided for by act of Congress approved May 31, 1900 (31 Stat., 221), have been paid, with one exception, and the settlers have removed from the reservation. In that case the settler has been unable to produce a clear title, consequently the matter is still pending. Another settler has filed a claim for $2,400 in addition to $2,100 which was paid him upon a quitclaim deed for his land and improvements. This claim has not been disposed of.

The heads of 46 Indian families east of Tongue River were paid for their improvements as provided by the aforesaid act.

By a recent survey of the northern boundary of the reservation 7 additional settlers have been found within its limits. They are without title to the land they occupy and their improvements are of small value, being estimated at only $2,965. An appropriation to pay the same was asked from the last Congress, but no action was taken by that body. The attention of Congress will again be called to the matter.

FORT HALL (IDAHO) CEDED LANDS.—The appraisement of the improvements of Indians on the ceded lands of the Fort Hall Reservation, who elected to remove therefrom to the diminished reserve, provided by the act of June 6, 1900 (31 Stat., 672), was completed during the year, and allotments were made to Indians who had located and decided to remain on the ceded lands.

The total appraised value of the improvements is $5,851.50, belonging to 23 Indian heads of families, and 7,177.17 acres were allotted to 90 allottees.

CHIPPEWA CEDED LANDS IN MINNESOTA.—In my last annual report I took occasion to state that the results obtained from the administration of the act of January 14, 1889, under the provisions of which the Chippewa Indians in Minnesota ceded the greater portion of the reservations occupied by them (25 Stat., 642), had not been satisfactory to the Department, as the system devised under said act and subsequent legislation had failed to secure to the Indians the largest benefit from the sale of the pine and agricultural lands. I then expressed the intention at the earliest date practicable to bring the matter more fully to the attention of Congress and to suggest remedies such as, in my judgment, might be necessary to better protect the interests of the Chippewa Indians.

Certain members of the Minnesota delegation in Congress, who were well informed of the necessity for some modification of existing

law, and the Commissioners of Indian Affairs and the General Land Office, who recognized the great need for further legislation, conferred with the Department on the subject, whereupon a draft of proposed legislation was prepared which authorized the sale of all merchantable pine timber, "green or growing or dead, standing or fallen," on said ceded lands, upon certain stated conditions which seemed to meet the views of all interested in the welfare of the Chippewas, and the same was submitted for the action of Congress as a substitute for H. R. 8494, first session, Fifty-sixth Congress, and H. R. 14019, second session, same Congress, both of which proposed modification of the aforesaid act of 1889, but neither of which met the favor of the Department or the Commissioner of Indian Affairs.

Action on both the bills named and the substitute measure failed, and consequently no relief has been afforded in these matters. Under the conditions, the existing legislation failing to properly guard or conserve the best interests of the Indians, which are so largely involved in the sale of the lands and the timber thereon, the proceeds of the lands under the law going to their credit in the Treasury as a permanent fund, I have considered it a duty to them to further postpone all action until Congress shall provide some measure for their relief whereby the greatest possible benefit may be derived from the sale of their lands.

ZUNI PUEBLO GRANT, NEW MEXICO.—These lands have been occupied by the Zunis for more than two hundred years. All the title papers were accidentally destroyed by a fire a few years ago. A bill to confirm title to them was introduced in Congress February 16, 1900 (H. R. 8635), but failed to become a law.

The matter is urgently recommended to the favor of Congress.

CHIPPEWA AND MUNSEE INDIANS IN KANSAS.—The claimants or heirs to funds derived from the sale of the allotments of certain deceased Chippewas and Munsees, sold under the provisions of the act of June 7, 1897 (30 Stat., 92), having been finally ascertained and a schedule thereof prepared, payment will soon be made. The surplus lands belonging to these Indians having been sold by the General Land Office, the proceeds will be distributed per capita among 54 claimants, who are members of the tribe but never received allotments, when they shall severally reach the age of 21 years. In the meantime the fund remains in the Treasury of the United States.

STOCKBRIDGE AND MUNSEE INDIANS, WISCONSIN.—A plan for the allotment of the common lands of these Indians was submitted to Congress on February 1, 1901, with favorable recommendation and urgent request for speedy action.

It is hoped that this matter will be favorably considered by the next Congress.

SEMINOLES IN FLORIDA.—There has been no change in the condition or status of the Seminole Indians in Florida since the date of my last annual report. At that date 23,061.72 acres of land had been purchased for them, at a cost of $13,355.52.

MISSION INDIANS ON WARNERS RANCH.—By a decree of the Supreme Court of the United States, an adverse decision was rendered on a claim of some Mission Indians to retain occupancy of a tract in southern California, known as Warners Ranch or Agua Caliente. The effect thereof will be to render homeless about 200 Indians who claim to have held these lands for generations.

In the meantime, pending action by the next Congress, and as a temporary expedient, certain lands in the vicinity were withdrawn from settlement and entry for the use of the Indians. It has since been ascertained that the lands withdrawn are practically worthless, and that such as might be available would support but a few families.

Therefore, an Indian inspector is under orders to proceed to California to endeavor to locate and arrange to secure suitable lands for these Indians.

WENATCHIE INDIANS, WASHINGTON—The removal of these Indians to the Colville Reservation failed because the undertaking proved to be greater than anticipated, and consequently a more expensive one.

The matter will be brought to the attention of the next Congress.

NEW YORK INDIANS.—Congress, by act approved March 3, 1901 (31 Stat., 1077), provided that not exceeding $10,000 might be used by the Secretary of the Interior to pay the "expenses necessary in ascertaining the beneficiaries" of the judgment of the Court of Claims on the claim of said Indians for lands arising under the treaty of Buffalo Creek of January 15, 1838, authority being given to use not exceeding the sum named out of the amount appropriated by the act of February 19, 1900, to pay said judgment.

Consequently, prompt steps were taken by the Department with the view of "ascertaining the beneficiaries," so that distribution of said fund might be made at the earliest possible date. Notice has been given to claimants by public advertisement in a number of newspapers, beginning September 1 last, and to continue to November 30 next, when the rolls will be closed. It may be said that the rolls are in a formative state. All applications will be duly considered and the rights of applicants determined, and from these the rolls prepared as soon thereafter as possible and payment of the fund made to those found entitled.

INDIAN OFFICE EXHIBIT AT PAN-AMERICAN EXPOSITION.—The work of many of the pupils of both the reservation and non-reservation as well as day schools, was placed on exhibition at Buffalo, and showed decided improvement over that furnished for previous expositions.

INDIANS AS EXHIBITS.—The custom of allowing Indians to take part in shows and exhibitions has been practically discontinued, but one permit for the purpose, the case being an exceptional one, having been granted during more than two years past. The Department has considered it a degradation of the Indian to permit him to be used for exhibition purposes, and a means of perpetuating habits that large sums of money are annually being spent to eradicate.

INDIANS AS EXHIBITORS.—In September last application was made to the Department for a permit to authorize a small delegation of Indians from the Fort Peck Agency, Mont., to exhibit the products of their farms and display the work of the agency boarding school at a fair to be held later at Glendive, Mont., under the auspices of the Dawson County Fair Association.

The apparent desire to become exhibitors instead of exhibits was regarded as highly commendable and as showing a degree of self-respect in sharp contrast with the other phase that was exceedingly gratifying to the Department, and leads to the hope that others will emulate the desire of these Indians to show in a public manner the products of their labor and industry.

Permission was gladly and promptly given for the Indians to take part in the fair as exhibitors under proper safeguards.

ADJUSTMENT OF ACCOUNTS OF TRADERS WITH OSAGE INDIANS.—The Secretary of the Interior was authorized and directed, by the Indian appropriation act approved March 3, 1901 (31 Stat., 1065)—

> to examine into the accounts of Indian traders with the Osage Indians at the Osage Agency and to determine the sums equitably due to such traders from such Indians, and to adjust their accounts upon the basis of a fair profit upon the goods which have been sold by such traders to such Indians, etc.

In accordance with this provision of law, steps were taken by the Department on March 14, 1901, to obtain from the aforesaid traders complete statements of all outstanding accounts against the Osage Indians, with necessary data to show the basis for their claims and proofs to establish the same.

I am informally advised by the Commissioner of Indian Affairs that the said traders have submitted their claims against the Indians to his office, and that the same are undergoing examination preliminary to their transmission to the Department for its examination and determination under the law.

INDIAN LANDS SET APART TO MISSIONARY SOCIETIES AND CHURCHES.—Twenty-two tracts of land, from one-half acre to 160 acres in size, on nine reservations, were set apart during the year for educational and religious work among the Indians.

TRANSPORTATION OF SUPPLIES.—The system of transporting Indian supplies by "common carriers," inaugurated in 1899 (fiscal year 1900)

under the provisions of the act of July 7, 1898 (30 Stat., 676), rather than under contracts let to the lowest bidders, is still being successfully and profitably carried on, and is giving much satisfaction.

MARRIAGE.—Instructions were issued during the last fiscal year designed to regulate or legalize marriages between Indians and between Indians and whites, and for keeping registers of licenses and marriages at Indian agencies, from which much good is hoped.

LANDS.

There were disposed of during the fiscal year ended June 30, 1901, public lands aggregating 15,562,796.30 acres, classified as follows: Cash sales, 1,301,668.94 acres; miscellaneous entries, embracing homesteads, land warrants, scrip locations, State selections, swamp lands, railroad and wagon road selections, Indian allotments, etc., 14,151,780.34 acres, and Indian lands, 109,347.02 acres, showing an increase of 2,108,908.34 acres as compared with the aggregate disposals for the preceding fiscal year.

The total cash receipts during the fiscal year from various sources, including disposal of public land, $4,307,437.15, and Indian land, $585,661.27; from depredations on public lands, $36,471.83; from sales of timber on forest reserves, $25,305.95; from sales of Government property, $597.78, and for furnishing copies of records and plats, $16,686.81; aggregate, $4,972,160.79, an increase of $592,402.69 over the preceding fiscal year.

The total expenses of district land offices for salaries and commissions of registers and receivers, incidental expenses, and expenses of depositing public moneys during the fiscal year ended June 30, 1901, were $773,617.99, an increase, as compared with the fiscal year ended June 30, 1900, of $46,036.01.

The net surplus remaining in the Treasury at the end of the fiscal year, after deducting from the total cash receipts the entire amount expended for the administration of the public-land and forestry systems, equaled $3,158,441.67, an increase over the surplus remaining at the end of the preceding fiscal year of $357,845.30. Attention is also directed to the fact that the cash receipts from depredations on the public lands, compromises, fines, etc., amounted, during the fiscal year, to $261,573.84, an increase over the preceding fiscal year of $25,538.59.

The total area of the public lands may be stated to be approximately 1,809,539,840 acres, of which 914,096,974 acres are undisposed of, 147,356,902 acres have been reserved for various purposes, and 748,085,964 acres have been appropriated.

The following table, compiled from reports received from the various local land offices, gives, by States and Territories, an approximate

estimate of the reserved as well as the unappropriated lands in the land States and Territories at the close of this fiscal year:

State or Territory.	Area unappropriated and unreserved.			Area reserved.	Area appropriated.
	Surveyed.	Unsurveyed.	Total.		
	Acres.	*Acres.*	*Acres.*	*Acres.*	*Acres.*
Alabama	312,630		312,630	52,820	32,292,470
Alaska	[1]	367,983,506	367,983,506	[2] 120,174	[1]
Arizona	11,615,248	37,155,806	48,771,054	18,285,008	5,736,258
Arkansas	3,224,128		3,224,128	2,560	30,316,992
California	34,052,596	7,996,412	42,049,008	16,063,670	41,857,242
Colorado	34,719,759	4,396,055	39,115,814	5,694,161	21,538,185
Florida	1,299,704	160,070	1,459,774	19,259	33,593,607
Idaho	11,680,089	30,795,087	42,475,176	1,747,311	9,070,953
Illinois					35,842,560
Indiana					22,950,400
Indian Territory				19,658,880	
Iowa					35,646,080
Kansas	1,085,315		1,085,315	987,875	50,309,530
Louisiana	254,317	65,018	319,335	1,468,434	27,267,591
Michigan	462,157		462,157	87,746	36,269,297
Minnesota	1,967,285	2,172,908	4,140,193	4,938,508	42,119,379
Mississippi	195,980		195,980		29,489,140
Missouri	281,727		281,727		43,514,113
Montana	19,138,446	46,664,861	65,803,307	12,347,531	15,442,762
Nebraska	9,926,670		9,926,670	69,642	39,140,968
Nevada	29,667,377	31,654,848	61,322,225	5,983,409	3,031,006
New Mexico	41,108,508	14,480,616	55,589,124	6,385,181	16,454,495
North Dakota	11,973,738	4,982,753	16,956,491	3,370,491	24,583,098
Ohio					26,062,720
Oklahoma	4,653,605		4,653,605	7,157,868	12,962,927
Oregon	23,642,364	10,141,659	33,784,023	5,500,821	21,992,596
South Dakota	11,471,138	397,866	11,869,004	12,802,946	24,534,450
Utah	10,830,242	31,685,613	42,515,855	5,487,668	4,537,917
Washington	5,613,943	6,299,221	11,913,164	10,764,568	20,069,148
Wisconsin	230,813		230,813	365,353	34,678,714
Wyoming	42,769,587	4,887,309	47,656,896	7,995,018	6,781,366
Grand total	312,177,366	601,919,608	914,096,974	147,356,902	748,085,964

[1] The unreserved lands in Alaska are mostly unsurveyed and unappropriated.
[2] So far as estimated.

PATENTS ISSUED.—Forty-two thousand two hundred and thirty-seven patents for agricultural lands were issued during the fiscal year, containing approximately 6,757,920 acres, an increase of 12,689 in number and 2,030,240 in acreage over the previous year. Of mineral and mill-site patents 1,388 were issued, embracing an area of 50,852.458 acres, a decrease from the former year of 27 patents and an increase of 8,459.934 acres. One hundred and four coal patents were issued, embracing 12,060.87 acres, an increase over the previous year of 35 patents and 2,911.71 acres.

RAILROAD AND WAGON-ROAD LAND PATENTS.—During the fiscal year there have been certified or patented on account of railroad grants 2,470,804.55 acres, as against an area patented during the fiscal year

ended June 30, 1900, of 1,277,572.68 acres, an increase of 1,193,231.87 acres. There were patented under wagon-road grants 165,547.18 acres, an increase of 104,045.66 acres over the preceding year.

ADJUSTMENTS.—The report of the Commissioner shows that material progress has been made in the examinations necessary to the adjustment of railroad land grants, including the administration of the acts of July 1, 1898 (30 Stat., 597–620), March 2, 1899 (30 Stat., 994), and March 2, 1901 (31 Stat., 950), relating to grants to the Northern Pacific Railroad Company. A detailed statement of the progress made in the adjustment of these grants will be found at page 72 of said report.

SWAMP-LAND PATENTS, SCHOOL AND OTHER STATE AND TERRITORIAL LANDS.—There were patented as swamp land in place 215,963.86 acres, and as swamp-land indemnity lands 3,239.83 acres, a total of 219,203.69 acres, an increase over the amount patented during the last fiscal year of 119,930.70 acres. School and other lands were selected and certified during the year under their several grants to the various States and Territories to the amount of 1,243,519.92 acres, an increase of 471,310.47 acres over the preceding year.

INDIAN AND MISCELLANEOUS PATENTS.—Patents of this class were issued during the year to the amount of 448,536.40 acres, an increase over the preceding fiscal year of 106,005.14 acres.

The total net increase in lands patented over the preceding fiscal year is 4,036,135.48 acres.

STATE DESERT-LAND SEGREGATIONS.—By section 4 of the act of August 18, 1894 (28 Stat., 372–422), as amended by the act of June 11, 1896 (29 Stat., 413–434), and act of March 3, 1901 (31 Stat., 1133–1188), provision is made for the donation to each of the desert-land States of not more than 1,000,000 acres of such lands. Under these acts two patents were issued to the State of Wyoming, aggregating 7,305.75 acres. Lists were approved as follows: State of Idaho, one, 6,528.05 acres; State of Wyoming, one, aggregating 77,198.76 acres.

ENTRIES IN ALASKA.—Under the provisions of the acts of March 3, 1891 (26 Stat., 1095), and May 14, 1898 (30 Stat., 409), three nonmineral entries for lands in Alaska have been patented during the last fiscal year.

RESERVOIRS FOR THE PURPOSES OF STOCK BREEDING AND TRANSPORTATION.—Under the act of January 13, 1897 (29 Stat., 484), the number of declaratory statements on hand at the beginning of the fiscal year was 9,563. There were received during the year 4,137 reservoir declaratory statements, making the total pending for action 13,700. Of this number, 4,104 were acted upon during the year, 3,979 of which were canceled or relinquished and the remainder, 125, were found to be in proper form and await further action under the law by the declarants. There were, accordingly, pending for action at the end of the fiscal year 9,596.

RIGHTS OF WAY FOR RAILROADS.—Under the act of March 3, 1875 (18 Stat., 482), providing for rights of way over public lands, the act of May 14, 1898 (30 Stat., 409), providing for rights of way in Alaska, and various special acts, 38 articles of incorporation were accepted, 478 maps of locations of railroads were received during the year, of which 118 were approved, 14 filed (not requiring approval); 4 were pending at the end of the fiscal year before the Secretary of the Interior, and 316 had been otherwise disposed of, a few of which were rejected and the rest returned for correction.

RIGHTS OF WAY FOR IRRIGATION AND OTHER PURPOSES.—Under the provisions of sections 18 to 21, inclusive, of the act of March 3, 1891 (26 Stat., 1095), as amended by section 2 of the act of May 11, 1898 (30 Stat., 404), 40 rights of way have been approved during the year for canals and reservoirs. Three hundred and twenty-four maps of the line or route of canals or sites for reservoirs were presented during the year; 60 were approved; 16 were filed which did not require approval; 191 were otherwise disposed of, being principally returned for correction, making, with the 36 pending at the beginning of the year, a total of 93 awaiting action by the Commissioner or Secretary.

Under the provisions of the tram-road act of January 21, 1895 (28 Stat., 635), as amended by section 1 of the act of May 11, 1898 (30 Stat., 404), 5 applications for permission to use rights of way have been approved during the past fiscal year. Twenty maps were on hand for action during that time, of which 6 were approved and 12 were otherwise disposed of, most of them having been returned for correction.

Under the act of May 14, 1896 (29 Stat., 120), providing for permission to use rights of way for electrical purposes, 3 applications were approved during the past year. There were pending during the year for action 23 maps, of which 3 were approved and 13 otherwise disposed of, most of them having been returned for correction.

In my reports for last year and the year before it was pointed out that the two acts above mentioned relating to right of way for canals, reservoirs, etc., together with four other acts relating to rights of way for various purposes over the public lands and reservations of the United States, constitute a group of statutes the administration of which has been the source of much embarrassment because of the unnecessarily large number of acts and the confusing amendments, while they do not, after all, cover the whole subject in a satisfactory manner, failing to provide for certain important uses of right of way and being otherwise too limited in scope.

In order that a comprehensive act covering the entire subject should be passed, appropriate legislation has been recommended by this Department, but no action has been taken thereon.

In view of the importance of this matter to the development of the industries of the West which are dependent upon the storage and conveyance of water, my former recommendation is renewed, and it is hoped that some act of the character indicated will be passed.

Attention is also called to the draft of a bill submitted to Congress by the Department on May 10, 1900, providing that the Secretary of the Interior be authorized to declare a forfeiture of a lapsed right of way for railroads, canals, reservoirs, etc., over the public lands and reservations of the United States, after notice to grantee. The importance of this legislation, to enable the Department to satisfactorily administer the various acts granting right of way over the public lands and reservations of the United States, for railroads, canals, reservoirs, etc., can not be too greatly emphasized.

RIGHT OF WAY FOR OIL PIPE LINES.—Under the act of May 21, 1896 (29 Stat., 127), granting right of way for pipe lines for the transportation of oil in the States of Colorado and Wyoming, no applications were received during the past year.

PUBLIC SURVEYS.—By the act of Congress approved June 6, 1900 (31 Stat., 615), making appropriations for the sundry civil expenses of the Government for the fiscal year ending June 30, 1901, and for other purposes, there was appropriated "for surveys and resurveys of public lands" the sum of $325,000, of which amount the Commissioner of the General Land Office was authorized to expend as much as he might deem necessary for examinations in the field, etc.

The sum of $75,000 was set aside to cover the cost of field examinations, and the sum of $10,000 was reserved for emergencies, leaving $240,000 to be apportioned among the several surveying districts. The apportionments made to the several districts were as follows:

Alaska	$5,000	New Mexico	$8,000
Arizona	12,000	North Dakota	20,000
California	10,000	Oregon	22,000
Colorado	6,000	South Dakota	2,000
Idaho	30,000	Utah	20,000
Minnesota	5,000	Washington	30,000
Montana	40,000	Wyoming	20,000
Nevada	10,000		

Further apportionments were made from time to time to several surveying districts from the fund of $10,000 held in reserve, and contracts were let and approved to the full extent of the means available. The annual surveying instructions for the fiscal year ending June 30, 1901, will be found in the appropriate place in the Commissioner's report.

Surveys were accepted during the fiscal year, after examination in the field, careful comparison of the surveying returns, and inspection

of the plats and field notes, covering 8,810,837 acres, distributed as follows:

Alaska	152	Nevada	51,250
Arizona	715,201	North Dakota	2,103,287
California	54,288	Oregon	750,951
Colorado	264,333	South Dakota	757,940
Florida	2,829	Utah	535,721
Idaho	849,057	Washington	292,658
Minnesota	299,730	Wyoming	467,522
Montana	1,665,918		

The figures above given show an increase of about 16 per cent in the total area surveyed over that of the preceding fiscal year.

ALASKAN SURVEYS.—By the act of March 3, 1899 (30 Stat., 1097), the rectangular system of surveys was extended to the district of Alaska, and an apportionment of $5,000 from the appropriation of $325,000 for the survey and resurvey of public lands was made to that district, and a contract, No. 1, has been issued to A. J. Adams, by which he is required to establish an initial point near Copper Center, on Copper River, and run the necessary base and meridian lines, to extend the public surveys northward into the agricultural and grazing lands of the interior.

The surveyor-general in his annual report refers to the great need of a rapid extension of lines of survey in the immense areas where rapid settlement and valuable interests already prevail, and presents an estimate of $108,872 for survey of public lands, mission stations, and other reservations for the fiscal year ending June 30, 1903, and in support of that estimate he refers to the vast expanse of grazing lands, hay lands, valleys adapted to the production of oats, potatoes, and other vegetables; also valuable coal deposits, to which no title can be acquired in advance of rectangular surveys.

He also recommends that the act of May 14, 1898, be amended so as to allow homestead entries to be made for 160 acres of land instead of 80 acres. He also shows that during the past fiscal year 38 applications for mineral surveys were filed. Thirty-one mineral surveys were ordered, embracing 110 locations. Twenty-five mineral surveys were approved, embracing 90 locations. Two nonmineral applications for town-site surveys were made; also 15 nonmineral applications for the survey of missionary stations, and 2 nonmineral applications for survey of private claims. Sixteen nonmineral surveys were approved, 18 suspended, 2 rejected, and 5 were awaiting action at the end of the fiscal year.

BOUNTY-LAND BUSINESS.—During the year military bounty land warrants to the extent of 8,960 acres were located in the several land States

and Territories. A summary of the denomination of the warrants and the acreage represented thereby is as follows:

	Number of warrants.	Aggregate acreage.
Act of—		
1847	4	400
1850	12	920
1852	1	40
1855	55	7,600
Total	72	8,960

ALASKAN LAND OFFICES.—The report of the Commissioner of the General Land Office shows that the excess of expenditures over receipts at the Sitka office from October 20, 1897, to June 30, 1901, was $7,118.17; that the receipts at the Rampart office from July 10, 1900, to June 30, 1901, were only $10, while the expenditures were $4,249.60; that the expenditures at the St. Michael office from July 1, 1900, to July 1, 1901, were $2,533.33, with no receipts at all; that the expenditures at the Circle office from July 1, 1899, to July 1, 1900, were $5,587.41, with no receipts; that the expenditures at the Peavey office from August 28, 1899, to May 31, 1901, were $7,153.12 with no receipts; that the expenditures of the Weare office were $1,868.30, with no receipts; that the rent charges at both St. Michael and Rampart are $600 per annum, with wood $15 per cord and coal at from $40 to $75 per ton at St. Michael; wood $20 per cord at Rampart and coal too expensive for fuel; that it required $600 to supply the Rampart office with wood alone last winter.

From this showing it appears that the offices heretofore maintained in the valley of the Yukon for the accommodation and encouragement of miners have required an expenditure of $21,391.76, with but one single application and a fee of $10.

After carefully considering all the facts and estimating future probabilities, the Commissioner is of the opinion that both the Yukon and Circle districts should be abolished, their territory added to the Sitka district, and their offices consolidated with the Sitka office at least for the present, and until such time as there shall appear some real necessity for an office in the Yukon country.

OIL FIELDS AND LIEU SELECTIONS.—In my last annual report I set forth the conditions developed by the discovery of petroleum in southern California, and of the action of this Department in withdrawing a number of townships in southern California until the character of the lands could be investigated.

There has been no abatement in the exploration for oil in California, and prospectors have been active in other localities, notably in Wyoming and Colorado. The suspensions heretofore made of townships

said to contain valuable deposits of oil from disposition under the agricultural laws and the examination of the lands by special agents have allayed to some extent the excitement theretofore existing, caused by the supposed appropriation of these lands by lieu scrippers. These suspensions have been continued through the year, and must continue until relief is obtained through legislation, the mining laws and regulations being inadequate to protect the bona fide prospectors who are spending their time and money in exploring for oil.

On May 9, 1901, I reported on two bills that were introduced in Congress, which proposed to allow locators of mining claims alleged to be valuable for petroleum deposits—

> Three months from and after the marking of their claims on the ground within which to begin work for the purpose of completing discovery, and such discovery, when made while working the claim with reasonable diligence, shall relate back and have effect nunc pro tunc, as though made before or at the time of marking the claim on the ground.

I recommended the passage of those bills, subject to the modification that the work of discovery should be completed within twelve months from date of location.

I desire now to renew that recommendation, as I believe some such legislation necessary for the adequate protection of oil lands and the stimulation of the oil industry.

PROTECTION OF PUBLIC LANDS.—It appears that during the year there was an average of about 60 special agents employed in the investigation of fraudulent land entries, and in otherwise protecting the public lands from illegal appropriation and timber trespass; that 1,086 cases were referred to them for investigation, hearings were ordered in 124 cases, 1,137 entries were held for cancellation, 741 were canceled, and 680 examined and passed. Final action was taken on 1,531 cases, and there are now pending 3,848 cases.

There are also pending in the General Land Office 187 agents' reports on land claims, 51 records of hearings, and 288 registers' and receivers' reports and miscellaneous letters.

DEPREDATIONS UPON PUBLIC TIMBER.—There were 548 cases of depredations upon public timber reported during the year, involving public timber and products therefrom to the value of $1,464,214.89, recoverable to the Government. One hundred and fifteen civil suits were recommended, involving an aggregate of $731,179.68; 86 propositions of settlement were accepted, involving $29,200.30, and sales were made of timber which had been cut unlawfully from public lands involving $4,291.53. There were also 188 criminal suits recommended. There was received from compromises effected under section 3469, United States Revised Statutes, $13,573.54. In addition, the amount involved in fines imposed and judgments rendered is $214,508.47, mak-

ing a total of $261,573.84, an increase of $25,538.59 over the preceding fiscal year.

On June 30, 1901, there were pending in the United States courts 152 civil suits for the recovery of a total amount of $1,916,944.70, the alleged value of the timber involved, and 308 criminal prosecutions for cutting and removing timber in violation of law.

COMPULSORY ATTENDANCE OF WITNESSES.—The recommendations made by the General Land Office and by this Department in previous years for needed legislation compelling the attendance of witnesses at hearings ordered on special agents' reports, before the local land offices, are renewed. Attention is earnestly invited to the urgent need existing for such legislation.

UNLAWFUL FENCING OF PUBLIC LANDS.—During the past year there were reported to the General Land Office 161 cases of unlawful fencing of public lands, embracing 2,487,657 acres. Thirty-four inclosures were reported as having been removed in compliance with notice requiring such action, embracing 227,440 acres; 127 cases were laid before the United States attorneys of the various States and Territories for action under act of February 25, 1885 (23 Stat., 321), embracing 2,260,217 acres. In addition to the unlawful inclosures, special agents reported during the year 4 drift-fence cases; 2 in New Mexico, which are pending further action, and 2 in Oklahoma, in which the fences were removed in compliance with notice to the owners.

TIMBER ON UNRESERVED LANDS.—For several years this Department has been urging the enactment of legislation to regulate the sale and use of timber on the unappropriated and unreserved public lands. The experience of this Department has been that the act of June 3, 1878, which authorizes residents of certain States and Territories therein named to cut and remove for building, agricultural, mining, and other domestic purposes, any timber growing on mineral lands, under rules and regulations prescribed by the Secretary of the Interior, and the act of March 3, 1891 (26 Stat., 1093), as extended by the acts of February 13, 1893 (27 Stat., 444), and March 3, 1901 (31 Stat., 1436), authorizing the residents of the States and Territories therein named to take timber from nonmineral public lands in such States and Territories for use therein for agricultural, mining, manufacturing, or domestic purposes, under rules and regulations prescribed by the Secretary of the Interior, *and the act of June 3, 1878 (20 Stat., 89), known as the timber and stone act, will, if not repealed or radically amended, result ultimately in the complete destruction of the timber on the unappropriated and unreserved public lands.*

As an illustration of the manner in which the timber and stone act operates to encourage the denudation of the public timbered lands, attention is called to section 5 of said act, which provides that any person who is prosecuted in the States therein named for trespass on

the public timbered lands, under section 2461 of the United States Revised Statutes, if not for export from the United States, may be relieved from prosecution by paying a sum equal to $2.50 per acre for the land on which the timber was cut.

The attention of this Department has just been called to four cases, involving 720 acres of vaulable timbered lands, the timber on which is worth several thousand dollars, where the parties escaped criminal prosecution by paying the wholly inadequate sum, equal to $2.50 per acre, for the land on which the timber was cut.

It will be seen from these illustrations that said act is a direct encouragement of depredations upon the public timber, and in the interests of that valuable portion of the public domain should be unconditionally repealed.

March 2, 1900, I transmitted to the President of the Senate pro tempore and the Speaker of the House of Representatives, with the recommendation that it be enacted into law, a bill entitled "A bill to authorize and regulate the sale and use of timber on the unappropriated and unreserved public lands." These bills were subsequently introduced in the Senate and House, respectively, as S. 3498 and H. R. 10405. On the 4th day of February, 1901, I again urged the passage of this proposed legislation, with an amendment thereto, as recommended by the Acting Attorney-General.

The need of the passage of such an act is so imperative that I earnestly recommend that the bill, with the amendment suggested by the Acting Attorney-General, become a law at the earliest possible date.

The opportunity offered by the act of June 3, 1878, known as the timber and stone act, for the fraudulent acquisition of title to public timbered lands was illustrated during the past year by the discovery, in Idaho and Montana, of a number of fraudulent entries under that act. Prosecutions are now pending against a number of individuals in both of the States named for perjury and subornation of perjury, and suits have been instituted to vacate the patents upon the entries that were apparently obtained by fraud, embracing 12,000 or 14,000 acres.

FOREST RESERVES.—The national forest reserves cover a part of the timbered public lands left as unoccupied lands in the agricultural settlement of the West. Lying almost wholly on high land in mountainous regions, the importance of these reserves to the prosperity of the West is threefold. In the first place, they are vitally essential to irrigation and to all the other interests that depend on *water supply*. Secondly, they are essential to the mining, lumbering, and other interests of the West, and, in fact, of the whole country, which depend *on wood*. Thirdly, they furnish to great numbers of cattle, horses, and sheep a summer range, without which they could not survive the year.

Public opinion concerning the forest reserves has been transformed during the past few years. At first hostile, through widespread misunderstanding, the great bulk of the Western people are now not only in full sympathy with the maintenance and wise administration of the reserves, but are eager, because of the manifest benefits which they bring, for their extension to those parts of the country which are at present without them.

The irrigators of the West have been specially active in urging the necessity of complete protection of the forests from fire and other destructive agencies and in asking that the reserves be extended to include all areas of public land from which issue streams of importance as sources of water supply. The extreme drought in many parts of the country during the past year has seriously diminished the flow of mountain streams. Together with the deplorable scarcity of water in portions of the West during the three preceding years, it has called public attention as never before to the vital necessity of forest preservation and reforestation. Whatever tends in any degree to reduce the vast losses which have been sustained by the agricultural interests is of vital importance to the farming communities. It is urged by them not only that the forests should be protected for their effect upon water supply, but that the Government should take the steps necessary to hold and save the waters which alone give value to drought-stricken lands. Congress years ago moved in this direction by authorizing the segregation of reservoir sites, the most important of which are near the headwaters of streams within the forest reserves.

The time has arrived when these reservoirs must be built and managed as part of a national system of forest and water conservation. They can not be successfully maintained without a thorough system of forest protection, for reservoirs whose drainage basins are not protected by forest lie open to the danger of being transformed by the washing of the soil from reservoirs of water to reservoirs of silt.

To give to the people of the West the full benefits which the forest reserves are capable of yielding, two things are necessary. First, the demand for more reserves should be met by the careful extension of the reserved area in accordance with the results of careful study on the ground, and, second, there should be a thoroughly practical and efficient administration of the reserves and the resources they contain.

In order to secure practical treatment and better protection for the forest reserves, and, above all, to bring about prompter and more effective use of their resources for the good of the people, the administration of them, while it remains in the Interior Department, will be carefully supervised and conducted by the Secretary himself.

Forestry is a business which can not proceed without skilled men with a practical knowledge of the best ways of handling and protecting forests. As with lumbering, its success depends on work in the

field, and especially upon intimate knowledge of local conditions and requirements. It is of the first importance to employ in the forest service men of high local reputation for character, ability, and knowledge of the woods, in addition to such practical trained experts as may be available. Men thoroughly versed in lumbering and wooderaft are essential.

The time for the introduction of practical forestry on the forest reserves has fully come. States and private owners of forest land are already cooperating with the Government for the better handling of their holdings to the extent of more than 5,000,000 acres. Some of the forest reserves are not less favorably situated for practical forestry than the best of these lands, and it is of the first importance both to the interests of the forest and to the interests of the West to give the reserves the best practical treatment without delay. It was found necessary about two years ago to apply to the Agricultural Department for working plans for conservative lumbering on the reserves and for reports upon all subjects requiring special knowledge of forestry except the mapping of the forests, now thoroughly well done by the Geological Survey.

The keynote of the administration of the forest reserves should be to increase the value of the reserves to the public and to perpetuate their forests by wise use. The utility of the reserves to the agricultural, mining, grazing, and lumber interests of the regions in which they lie is so great, so generally recognized, and so rapidly on the increase that to give them any form of management but the best available is a most serious blow to the prosperity of the West. Workmanlike administration of the forest reserves means protection through them to all the interests which depend upon them.

Forestry, dealing as it does with a source of wealth produced by the soil, is properly an agricultural subject. The presence of properly trained foresters in the Agricultural Department, as well as the nature of the subject itself, makes the ultimate transfer, if found to be practicable, of the administration of the forest reserves to that Department essential to the best interests, both of the reserves and of the people who use them.

Hereto appended, page 218 (Exhibit B), will be found an outline of the principles and practice governing the administration of the national forest reserves which the Commissioner of the General Land Office has been directed to carry into effect.

Since the close of the fiscal year ending June 30, 1900, three new forest reserves have been created, as follows:

The Crow Creek Forest Reserve, in Wyoming, created by proclamation of the President dated October 10, 1900, embracing an area of 56,320 acres;

The Wichita Forest Reserve, in Oklahoma, created by proclamation of the President dated July 4, 1901, embracing an estimated area of 57,120 acres; and

The Payson Forest Reserve, in Utah, created by proclamation of the President dated August 3, 1901, embracing an estimated area of 86,400 acres.

By Executive order dated June 29, 1901, 46,080 acres were eliminated from the Cascade Range Forest Reserve, in Oregon, and by proclamation of the President dated July 1, 1901, 142,080 acres were added to said reserve, making the net increase in the size of the reserve 96,000 acres.

The following reserves were reduced in size:

The Washington Forest Reserve, in Washington, by proclamation of the President dated April 3, 1901.

The Big Horn Forest Reserve, in Wyoming, by Executive orders dated April 15, 1901, and June 25, 1901.

The Olympic Forest Reserve, in Washington, by proclamation of the President dated July 15, 1901.

There are now 41 forest reserves, created by Presidential proclamations, under section 24 of the act of March 3, 1891 (26 Stat., 1095), embracing an estimated area of 46,410,209 acres, a list of which reservations, with the respective areas and the States and Territories in which they are located, will be found in its appropriate place in the Commissioner's report.

The forest policy inaugurated by my immediate predecessor continues to vindicate the wisdom of its establishment. During the past year not only has the acreage burned over in the reserves been greatly reduced over that of the preceding fiscal year, but the acreage per fire has been reduced nearly one-half, and the necessity for continuing this policy in the interest of the public, and for an increased appropriation by Congress for the carrying on of the work has been clearly demonstrated.

The patrol of the reserves was carried on by a force of rangers, which during the fiscal year was brought to the maximum during the fire season, of about 500, four hundred and seventy-five of whom were on duty at one time. October 15, 1900, about 415 rangers were still on duty; the force was then rapidly reduced, so that a month later there were about 269 rangers, which number was still further reduced so that the maximum number during December, 1900, and January, February, March, and April, 1901, was from 165 to 185, about 100 of them being employed in the southern reserves.

In May, 1901, the force was increased to 215 and in June to 280.

The character of the duties required of these rangers was set forth at length in my report of last year, and in view of the increased efficiency of the force I concur in the Commissioner's recommendation

that not less than the appropriation of $300,000 for the forest service in connection with the creation and administration of forest reserves be continued for next year, with a possible increase in case additional lands are set aside as forest reservations.

SELECTIONS IN LIEU OF PRIVATE LANDS IN FOREST RESERVES.—In my annual report for the fiscal year ending June 30, 1900, I renewed my former recommendations for further modifications of the act of June 4, 1897, permitting the selection of lands in lieu of those relinquished in forest reserves. I set forth in that report illustrations of the abuses under the existing law.

Those abuses still exist and are the chief obstacle to the extension of the forest-reserve system. *The enactment of legislation along the lines recommended by this Department is, in my judgment, absolutely essential to correct the abuses in regard to such lieu selections, and I earnestly recommend that such legislation be passed.*

An idea of the present extent of lieu-land selections may be had from the showing made by the Commissioner in his report that there had been submitted by individuals, firms, and corporations under and since the act of June 4, 1897, 4,231 selections, embracing 892,509.10 acres, and that of these, the selections submitted during the past fiscal year alone embraced 332,770.07 acres. The greatest number of relinquishments made as bases for these selections were of lands in the States of California and Oregon.

STOCK GRAZING IN FOREST RESERVES.—For the calendar year ending December 31, 1901, the Department authorized the grazing, under permits to be issued on application approved by the Department, of 1,400,000 head of sheep on the eight reservations mentioned in the Commissioner's report. During the year 387 permits, covering 1,180,318 sheep, have been approved by me.

The Department also authorized during the calendar year, or such part of the year as was customary to the reserve, 434,750 cattle and horses to graze on the thirty-three reservations mentioned in the Commissioner's report, each horse to count as two head of cattle in certain of said reserves.

Under that authorization 1,921 permits have been approved by me, covering 252,746 cattle and 24,302 horses.

SHEEP GRAZING IN FOREST RESERVES.—The localities covered by many of these forest reserves embrace areas that include the ranges over which large numbers of sheep for years past have grazed, and the wool-growing interests of those sections have insisted that any curtailment of their grazing privilege would be inimical, if not destructive, to that industry.

On the other hand, those engaged in agricultural pursuits purely and who are directly interested in the conservation of the water supply for purposes of irrigation, which is the primary purpose for which these

reservations are created, have contended with equal energy that sheep grazing in these reserves destroys the forest cover and so hardens the soil that the melting snows and the rainfall pass off in a flood, thus preventing the conservation of the water supply and defeating the purpose for which said reserves were created. With these contending interests clamoring before the Department for recognition and each insisting on the absolute correctness of its theory, the Department has had no little embarrassment in determining upon a policy that would be fair to both of them.

I recognize fully the vast interests involved in the wool-growing industry, but I also recognize that the paramount question before the people of the West to-day, especially those in the arid regions, is how to properly conserve and protect the water supply so as to furnish a sufficient amount to answer all the demands for irrigating purposes, and the best solution that has yet been offered to that problem is the creation, the efficient patrolling, and the proper administration of forest reserves.

Under these circumstances I have adopted the policy of permitting sheep to graze in that portion of certain reserves where it is shown, after careful examination, that such grazing is in no way injurious to or preventive of the conservation of the water supply, and that policy it is my purpose to continue.

Such a policy, in my judgment, will afford all the encouragement to the wool-growing industry that it can reasonably ask in this connection from this Department, and is not inconsistent with those vast interests dependent upon irrigation, which demand consideration at my hands.

SALE OF TIMBER IN FOREST RESERVES.—Seventy-five petitions for sale of timber from lands within forest reserves were received during the past year, involving 26,175,271 feet of timber, board measure, and 21,715 cords of wood; and three petitions have been received in which the statement of the amount of timber sought was so indefinite that no estimate thereof was possible.

Forty-two petitions were pending before the General Land Office at the beginning of the fiscal year and 31 sales have been effected, amounting to $29,250.88, which sum has been paid to the receivers of the public moneys of the several United States land offices. Petitions have been withdrawn or passed upon unfavorably by the Department in 25 cases, and 62 cases are pending examination, completion of advertisements, or necessary action by forest officials.

A rigid insistence on the use of dead timber to supply the demand wherever practicable has won for the system the commendation and support of thinking men, who appreciate the effort to minimize the use of living timber to save the dead timber, to realize its value, and to rid the forests of an undesirable element. The provisions of the

law are becoming better understood every day, and as that occurs its popularity is demonstrated by the increased number of petitions and the cheerful compliance with the provisions of the law and the regulations of the Department thereunder.

SAN FRANCISCO MOUNTAINS FOREST RESERVES.—During the past two years I have been endeavoring to reach some arrangement with the owners of the odd-numbered sections adjoining the San Francisco Mountains Forest Reserves in Arizona that will enable me to recommend to the President such action as would effect the consolidation of said reserves.

During the past year such proceedings were had in the matter that a proposition was finally submitted to this Department by the owners of the odd-numbered sections within the exterior limits of said reserves which I approved and which it was expected would effect the consolidation desired.

Approximately, said odd-numbered sections embrace an area of 900,000 acres, all of which I understood was to be relinquished to the United States, and other lands in lieu thereof selected elsewhere. When it came, however, to the carrying out of the proposition submitted, it was discovered that the owners of the odd-numbered sections had overlooked the fact that an estimated area of 150,000 acres, and which were timbered lands, could not be relinquished because they were either covered by contracts of sale or by contracts providing for the removal of the timber therefrom.

Other information received by the Department led me to believe that a large portion of the remaining 750,000 acres which it was proposed to relinquish was in no sense timbered lands, and that the actual acreage of timbered lands that would be acquired by the Government if said 750,000 acres were relinquished to it would not be great enough to warrant the Government in making the exchange of lands under the terms of the proposition, nor great enough to aid materially in conserving the water supply. I therefore declined to proceed further in the matter, or to ask the President to make such consolidation by proclamation, and I so advised the parties in interest.

A very clear statement of the proceedings had before this Department in relation to said proposed consolidation is set forth in my letter of July 2, 1901, to Mr. A. B. Leach, president of the Arizona Water Company, New York City, N. Y., in reply to his communication of June 21, 1901, addressed to the President. Both of said letters, that of Mr. Leach and the directors and attorneys of the Arizona Water Company to the President, and my reply thereto, are hereto appended, page 222, marked Exhibit C.

TEMPORARY WITHDRAWALS WITH A VIEW TO CREATING FOREST RESERVES.—In addition to the reservations now in existence, there have been withdrawn in several instances, upon requests and petitions

from city officials and other citizens in various localities, portions of the public domain from settlement, entry, sale, or other disposal, with a view to preventing their appropriation pending consideration of the question of the advisability of setting the same apart as a forest reserve, as follows:

Proposed Elkhorn forest reserve, in Montana.
Proposed Salt Lake forest reserve, in Utah.
Proposed Las Animas forest reserve, in Colorado.
Proposed Tooele forest reserve, in Utah.
Proposed Elk Creek forest reserve, in Oregon.

Should it be found on investigation that it is inadvisable or impracticable to create forest reserves from the areas thus temporarily withdrawn, the order of temporary withdrawal will be revoked and the land restored to the public domain for disposition under the various public-land laws.

OTHER TEMPORARY WITHDRAWALS.—Temporary withdrawals have also been made of various portions of the public domain which contain natural curiosities or ruins and relics of scientific or historic interest, with a view to the creation of national parks, namely:

Proposed Pajarito national park, in New Mexico.
Proposed El Moro (or Inscription Rock) national park, in New Mexico.
Proposed Wind Cave national park, in South Dakota.

CONSERVATIVE LUMBERING IN FOREST RESERVES.—The subject of conservative lumbering in forest reserves was referred to in my last annual report. It was there stated that the subject was under consideration in connection with the Agricultural Department, and that as a preliminary step in the matter instructions had been issued to each of the forest superintendents to make a careful study of the subject as applicable to the particular reserve under his charge, and thereafter submit a comprehensive report in regard to each reserve, showing what he deemed the best methods to be pursued in connection with harvesting the timber therein, and that they were also directed to make a further study and report upon the closely related subject of reforestation, and to cooperate with the work of the Agricultural Department in connection with this branch of forestry.

The subject is still under investigation, and it is hoped that definite results will be obtained by the time my next annual report is submitted and that I will be able to make definite recommendations at that time in relation thereto.

CHIPPEWA CEDED LANDS IN MINNESOTA.—A brief history of the legislation passed by Congress in relation to these lands is set forth in my last annual report, and it was therein stated that a sale of the pine lands in the four ceded townships in the White Earth Reservation had been ordered, the sale to take place on November 27, 1900, and that the agricultural lands in said townships had been directed to be opened

for disposition under the homestead laws on December 4, 1900, and that certain other tracts mentioned in my said report had also been ordered to be sold at the same time. The sale occurred on the day mentioned, namely, November 27, 1900.

Subsequent thereto, information having reached me that the bidders at said sale had colluded and conspired to keep down the price of said lands, I directed the Commissioner of the General Land Office not to approve any of the purchases made at said sale nor to issue any patents thereon until further advised by this Department.

In a few instances, where the purchasers have shown that they made their purchase in good faith, paid a reasonable price for the lands, and were not parties to any collusion or conspiracy to keep down the price of said lands, I have modified said order and authorized the Commissioner of the General Land Office to approve the purchase and issue patent thereon. Otherwise the order directing that said sale shall not be approved or patents issued thereon still stands, and will stand until an investigation by a reliable officer of this Department shows that there was no irregularity in the matter of said sale as charged.

Opening of Kiowa, Comanche, and Apache Indian lands in the Territory of Oklahoma.—Under agreements ratified by the acts of March 2, 1895 (28 Stat., 895), and June 6, 1900 (31 Stat., 676), certain lands in the Territory of Oklahoma were ceded to the United States by the Wichita and affiliated bands of Indians, and the Kiowa, Comanche, and Apache tribes of Indians, respectively, and by the act of March 3, 1901 (31 Stat., 1093–1094), it was provided that the lands to be opened to settlement and entry under said acts above mentioned should be so opened by Presidential proclamation; that said proclamation should prescribe the manner in which said lands might be settled upon, occupied, and entered by persons entitled thereto, under the acts ratifying said agreements, respectively, and that no persons should be permitted to settle upon, occupy, or enter any of said lands except as prescribed in said proclamation until after the expiration of sixty days from the time when the same should be opened to settlement and entry.

By proclamation dated July 4, 1901, the President prescribed the manner in which said lands might be settled upon, occupied, and entered by persons entitled thereto under the acts ratifying said agreements, a copy of which proclamation is hereto appended, page 225, marked Exhibit D.

It was provided in said proclamation that the Secretary of the Interior should prescribe all needful rules and regulations necessary to carry into full effect the opening therein provided for, and under the authority thus conferred I designated Hon. W. A. Richards, Assistant Commissioner of the General Land Office, to take charge of the open-

ing under my instructions; and he was given full authority in the premises.

The unparalleled success of said opening, the successful manner in which the Assistant Commissioner and his assistants conducted and completed their unusual and extremely laborious work, and the systematic and businesslike way in which he discharged the duties imposed upon him by the Department will, I trust, cause said opening to be accepted as a precedent for all future openings of the public domain.

The detailed account of the services performed by the Assistant Commissioner, and of the manner in which said opening was accomplished, is set forth in his report to this Department, dated October 9, 1901, a copy of which is hereto appended, page 246, marked Exhibit E.

Briefly, the Assistant Commissioner, under the instructions of the Department, was required to subdivide the country to be opened into counties, locate the county seats of said counties, and survey and subdivide them into town lots. He also had charge of the registration of those who desired to make homestead entry under the President's proclamation and of the drawing which determined the order in which the registered applicants were to be permitted to make homestead entry of the lands embraced in said opening. One hundred and sixty-four thousand four hundred and sixteen persons were registered and participated in said drawing, but there were not lands enough to satisfy more than 13,000 applications.

The Assistant Commissioner also had charge of the sale of town lots in the county seats which he located and surveyed. Every lot was sold. The total receipts from the sale aggregated $736,033. The expenses incurred in making the sales of said town sites aggregated $5,831.15, a little less than four-fifths of 1 per cent of the total receipts, leaving a balance of $730,201.85, which was deposited to the credit of the Secretary of the Interior, as trustee of said town sites, in the subtreasury at St. Louis.

Under the act of March 3, 1901, it was provided that the expenses incident to surveying and subdividing, platting, and selling of said town lots should be deducted from the sales thereof. Those expenses equaled $5,284.23, one-third of which, or $1,761.41, is properly chargeable against the receipts from the sale of each town site, and as the whole sum, $5,284.23, was audited by the General Land Office and paid from the appropriations to which they were properly chargeable, said sum should be deducted from the receipts of the sales of said town lots, on account of said expenses, and deposited to the credit of the Treasurer of the United States, which would leave the total net receipts from the sale of the three town sites $724,917.61.

While an itemized statement of the expenses incident to the registration, drawing, and making entries under the proclamation can not be prepared until full reports have been received from the local land

officers at Lawton and El Reno, a very close estimate of the same can be made as follows:

Salaries and per diem of W. A. Richards and 33 detailed clerks during the time engaged in registration, drawing, and making entries (estimated)	$8,271
Railroad fare and necessary traveling expenses of same from Washington, D. C., to Oklahoma and return	3,100
Incidental expenses of registration and drawing, as shown by advances made to the local officers	5,920
Salaries of registers and receivers for two months	2,000
Salaries of 10 local land-office clerks for two months	1,500
Total	20,791

In addition to other fees, of which no account is now available, the land offices at Lawton and El Reno received as fees upon the 11,638 homestead entries made during the sixty-day period the sum of $162,932, which sum will be deposited in the Treasury. Deducting from this sum the amount of expenses as estimated, a balance of $142,141 is left to the credit of the Government upon this account. This is a net sum accruing to the Government in the transaction of the business of opening these ceded lands to settlement and entry.

As showing the financial working of the plan prescribed by the proclamation, it is proper to take into account the net receipts from the sale of the three county-seat town sites, although they will be devoted to public improvements in the respective counties. The net receipts from the town-site sales were $724,917, which, added to $142,141, the net receipts of the homestead entries, makes a total of $867,058 as the net receipts from the opening of these lands up to October 4, 1901, the end of the sixty-day period fixed by the proclamation.

It is believed that the orderly and business-like methods that characterized this opening and the small per cent that the expense of the sale of said town sites bore to the total receipts make a showing that has never been equaled in any opening or sale of public lands in the whole history of the administration of the public-land system.

The quiet and orderly manner in which the opening was accomplished is most gratifying, especially when contrasted with the utter disregard of law and order, the outrages, and the contests which characterized the former openings on the "sooner" plan, and the spectacle of 151,000 disappointed applicants quietly retiring in favor of the 13,000 successful ones, is a characteristic demonstration of the willingness of the American people to respect and obey the law when its enforcement is accomplished by such rules and regulations as provide an absolute equality of opportunity to all, as was the case in the opening which the Assistant Commissioner and his assistants conducted with so much credit, and which secured the unqualified approval of all who were interested therein.

I desire also, in this connection, to testify my high appreciation of the able and invaluable services rendered by the Hon. Willis Van Devanter, Assistant Attorney-General for this Department, in the labors devolving upon this Department preliminary to and after the opening of said lands. The questions presented, both legal and administrative, were numerous and vexatious, and too much can not be said of the masterly manner in which he met them all and discharged the onerous duties imposed upon him.

The thanks of this Department are also due, and have been gratefully tendered, through the War Department, to Maj. G. L. Scott, commanding officer at Fort Sill, and the officers and troops under him, for the prompt and thorough manner in which they assisted in the preservation of order during the opening and the complete protection of the hundreds of thousands of dollars received as proceeds of property disposed of.

The Department also desires to express its high appreciation for the services of the Hon. D. P. Dyer, of St. Louis, Mo., and Hon. Frank Dale, of Guthrie, Okla., acting as a committee, with the Hon. W. A. Richards, to superintend the drawing.

Des Moines River Land Claims.—Congress, by act approved August 8, 1846, granted "certain lands to the Territory of Iowa, to aid in the improvement of the navigation of the Des Moines River in said Territory." Much of that land had been settled upon under the homestead, preemption, and other public-land laws, and Congress, by joint resolution approved March 2, 1861, endeavored to quiet the title to said lands.

The sundry civil act approved August 18, 1894 (28 Stat., 372, 396, 397), appropriated $200,000 to be expended by the Secretary of the Interior in the adjustment of the claims of settlers on the so-called Des Moines River lands in the State of Iowa, and also authorized the appointment of a special commissioner to investigate, hear, and determine the claims of all settlers, their heirs, or assigns. The special commissioner appointed in pursuance of such authority to investigate the claims of said settlers made report thereof on the 1st day of May, 1896. Such report is embodied in Senate Document No. 258, Fifty-fourth Congress, first session. It shows that the amount of awards made by the commission to settlers and claimants on said Des Moines River lands aggregated $183,854.07.

All of said claims were paid in full except one, and that was all paid except the amount belonging to one heir, who, it appears, is a native of Sweden, and whose address could not be ascertained.

The sundry civil bill of July 1, 1898 (30 Stat., 625), made a further appropriation of $40,000 to pay a certain class of these claims the payment of which was not authorized by the act of August 18, 1894,

and the sundry civil bill of March 3, 1899 (30 Stat., 1101), made a further appropriation of $150,000 to complete the payment of the claims specified in the act of July 1, 1898.

Under the authority conferred by the act of July 1, 1898, my immediate predecessor appointed Hon. John L. Stevens, of Boone, Iowa, as special commissioner to take such other and further evidence and make such other and further examination as might be required for the adjudication of the class of claims mentioned.

Judge Stevens completed his investigation and filed his report, which was duly approved by me April 27, 1901, and the claims recommended by him were ordered paid. His report shows that he examined a total of 581 cases, which represented claims aggregating $1,181,817.45. One hundred and sixty-three claims were allowed by Judge Stevens, amounting to $183,623.02. All of the claims allowed, with the exception of ten or twelve, have been paid. The delay in those remaining unpaid is occasioned in most instances by the death of the original claimant, necessitating the appointment of administrators, or guardians for minor heirs.

It is believed that complete payment will be perfected in a short time.

GREER COUNTY, OKLAHOMA.—On January 15, 1901, Congress passed an act (31 Stat., 731) providing, among other things, for ascertaining—

the amount of taxes collected by the State of Texas in what was formerly known as Greer County, and the expenditures made on account of said county by said State, etc.

In the exercise of the authority conferred on the Secretary of the Interior by said act, steps have been taken looking toward the carrying out of its provisions.

PENSIONS.

The report of the Commissioner of Pensions shows that the total number of pensioners on the roll during the fiscal year ended June 30, 1901, was 1,041,321, and the number remaining on the roll at the close of the year was 997,735, an increase of 4,206 as compared with the number of pensioners at the close of the fiscal year 1900. This is over 4,000 in excess of any previous year, and constitutes "high-water mark" in the history of the Bureau.

The additions to the roll during the year consisted of 44,225 new pensioners and 3,567 restorations, a total of 47,792, while the losses to the rolls during the same period from deaths and other causes were 43,586.

The pensioners on the roll June 30, 1901, are classified as follows, viz:

Widows and daughters of Revolutionary soldiers	9
Survivors and widows of soldiers of war of 1812	1,528
Survivors and widows of soldiers of Indian wars	4,565
Survivors and widows of soldiers of Mexican war	15,677

General laws:	
Army invalid pensioners	293,186
Army widows, minor children, etc	86,504
Navy invalid pensioners	4,489
Navy widows, minor children, etc	2,298
Army nurses	650
Act of June 27, 1890:	
Army invalid pensioners	422,481
Army widows, minor children, etc	138,490
Navy invalid pensioners	15,633
Navy widows, minor children, etc	6,621
War with Spain:	
Army invalid pensioners	3,344
Army widows, minor children, etc	1,981
Navy invalid pensioners	211
Navy widows, minor children, etc	68
Total	997,735

There were 229,758 claims adjudicated during the year, of which 109,668 were allowed and 120,090 were rejected. The allowances may be classified as follows, viz: Original pension claims, 44,225; restorations and renewals, 3,567; increase, reissues, additionals, and supplementals, 45,356; accrued and duplicates, 16,520.

The report of the Commissioner shows that the total number of claims of all classes pending on June 30, 1901, was 403,569, being a reduction of 33,535 claims for the fiscal year. Of the number of pending claims, 228,534, or more than one-half, were filed by persons who have heretofore been granted a pension and who are now seeking an additional allowance; 33,532 are claims on account of the war with Spain; 24,206 are claims for accrued pension due deceased pensioners; 6,577 are claims that were filed by soldiers who have since died; 11,798 are claims of soldiers that have never been adjudicated; 32,520 are original invalid claims that have been rejected from one to many times each for want of evidence showing title; and 41,399 are claims for "new disabilities."

The appropriation for the payment of army and navy pensions for the fiscal year ended June 30, 1901, was $144,000,000. Adding the repayments to the appropriation ($3,469.01) the sum available for pensions for the fiscal year was $144,003,469.01.

The amount disbursed for army and navy pensions during the year was $138,531,483.84, of which amount $67,867,233.84 was paid on account of pensions under the general law; $66,973,481.15 on account of pensions under the act of June 27, 1890; $1,175,225.76 for pensions on account the war with Spain, and $2,389,218.99 for pensions on account of wars prior to March 4, 1861. The amount disbursed by Treasury settlement was $126,324.10.

The amount disbursed for navy pensions was $3,787,693.03.

The increase over the expenditures for the previous year was $69,353.19, and there was an unexpended balance on June 30, 1901, of $5,471,985.17 to be covered into the Treasury.

The amount expended for salaries and other expenses of the Pension Bureau was $2,498,639.90; the cost of disbursments, fees of examining surgeons, etc., was $1,370,155.54, making the gross expenditure on account of pensions, disbursements, office expenses, clerk hire, etc., $142,400,279.28.

The annual value of the pension roll as it stood on June 30, 1901, was $131,568,216, an increase of $33,672 in the annual value of the roll from the year proceeding. The average annual value of each pension on June 30, 1901, was $131.87, a slight decrease from the former year, caused by the death of pensioners who were in receipt of high rates of pensions, and by the reduced number of general-law pensioners. The annual average value of general-law pensions has increased from $167.53 to $168.67, while the average value of pensions under the act of June 27, 1890, has decreased from $108.28 to $108.09, and the average annual value of pensions granted on account of service in the war with Spain has decreased from $169.10 in 1900 to $153.50 in 1901.

The number of original applications for pension filed during the year was 58,373, which number includes 14,161 on account of service in the war with Spain.

The total number of applications for army and navy pensions received in the Pension Bureau during the year was 218,616, of which number 117,986 were applications for increase.

The number of pensioners living in foreign countries at the close of the year was 4,547, to whom was paid in pensions the sum of $641,161.65. There were also 72 pensioners residing in our insular possessions, who received during the year the sum of $10,312.89,

The number of claims filed under the act of March 3, 1901, which is an amendment of section 4708 of the Revised Statutes, confirming title to restoration of pension to remarried widows under conditions specified in the act, was 3,258. They are being adjudicated as rapidly as the evidence is furnished to complete them. It is not now practicable to estimate the number of persons that will be entitled to the benefits of this act.

The number of special acts granting pensions and increase of pensions passed at the first session of the Fifty-sixth Congress was 684, and the number passed at the second session was 707, making a total of 1,391 special acts for the Congress.

A net decrease is shown in the number of pensioners for the old wars for service prior to March 4, 1861, of 4,884; a net increase in the number of those pensioned on account of the war of the rebellion of 3,301; an increase in the number pensioned on account of the war

with Spain of 5,604, and 16,610 pensions were granted to widows under the act of June 27, 1890, or nearly 4,500 in excess of the number granted the previous year, the result of the act of May 9, 1900, amendatory of the former law.

The total amount paid to pensioners during the year as first payments upon the allowance of their claims was $9,934,763.54. These payments were on account of arrears of pension, which are becoming smaller each year by reason of the progress which has been made in bringing the adjudication of claims current, thereby lessening the "arrears" period between date of filing the claim and the date of its settlement. There are, however, many claims adjudicated carrying large sums as "arrears," 675 of these having been allowed during the year, in which the first payment averaged nearly $1,500 each.

The amount paid as fees to attorneys during the year was $591,245.22, an increase of $73,868.90 over the previous year. The Commissioner reports that this increase was caused by the allowance of Spanish war claims, in nearly all of which the attorneys had filed agreements from claimants for a $25 fee, although most of the claims required very little service on the part of the attorney aside from the preparation of the declaration.

The appropriation for medical examinations for the fiscal year was $700,000, of which $661,654.58 was expended during the first nine months of the year, leaving only a small balance available for the payment of examining surgeons for making medical examinations for the months of April, May, and June, 1901. The large number of orders for medical examinations issued during the year is attributable to the demands of claimants for increase of pension, and at least 100,000 of the medical examinations held were unproductive in that they failed to show an increase of disability. No limit is imposed upon the filing of applications for increase, and therefore no limit to the orders for medical examinations can be established.

During the year six of the eighteen pension agencies occupied leased quarters, at a total annual rental of $11,855. Since then the agencies at Buffalo, N. Y., and Topeka, Kans., have been removed to Government buildings, so that now only four agencies occupy offices outside of buildings owned by the Government, at an annual rental of $9,480. The accounts of the agents are submitted for audit in better condition and with greater uniformity than heretofore, thus enabling the accounting officer to pass upon them without delay.

Prior to the year 1900 there was no systematic effort made to ascertain the disposition made of pension money paid to guardians, but supervision of the expenditure of the pension funds intrusted to them was left almost entirely to the courts, notwithstanding their want of jurisdiction in such matters, as shown in decisions of the Federal courts. In January, 1900, a rule was adopted requiring guardians to render the Commissioner

annual accounts of their receipts and expenditures of pension money. This requirement resulted in showing that pension money in the hands of guardians was often being diverted from its proper uses, and that pensioners and the Government alike were being defrauded under the lack of system which had obtained prior to the adoption of the rule.

Many cases were revealed in which the guardians were appropriating the pension to their own use in various ways, while the wards were being maintained at public expense.

A number of cases are cited in the report of the Commissioner showing the accumulation of funds in the hands of guardians ranging from $1,000 to $26,000, while the intended beneficiary is being cared for in some public institution at the expense of the public.

The question as to the proper disposition of accumulated funds in the hands of guardians was submitted to the Department by the Commissioner on May 1, 1901, and the conclusions reached were in effect as follows, viz:

1. The guardian of a pensioner is the agent of the United States for the proper expenditure of pension money in his hands, irrespective of the duties devolved upon him by the State law.

2. A pension fund granted to a pensioner, in the hands of a guardian, is in transitu until it reaches its final destination, and is controlled only by the United States; and the Commissioner of Pensions is invested with the discretionary power necessary to the proper administration of the pension laws, and guardians holding pension funds are subject to his direction, both before and after the death of their wards.

3. All funds which have accumulated in the hands of a guardian by operation of the pension law and have not been paid to the pensioner or expended in accordance with law in his behalf are in the nature of accrued pension.

4. An unexpended pension fund in the hands of a guardian has not, in legal contemplation, been paid to the pensioner and is an accrued pension.

5. The act of March 2, 1895, is the law of distribution of accrued pension of a deceased pensioner, and applies to the fund in the hands of a guardian unexpended at the time of such pensioner's decease.

Under this decision no further pension will be paid to guardians except as the needs of their wards shall require; and the pension thus withheld will be paid to the pensioners upon their restoration to competency, or distributed in accordance with the provisions of the act of March 2, 1895, upon their death.

The Commissioner expresses the opinion that the justness of this decision and the force of its conclusions will appeal to the courts, to all right-minded guardians, and others directly or indirectly concerned, and the general public as well, and that they will fully approve the practice which legitimately flows therefrom.

The number of claims filed for pension as a result of disabilities incurred in the service from April 21, 1898, to June 30, 1901 (Spanish-American war), was 45,710, this number of claims being about 20 per cent of the number of men enlisted for the war with Spain, while in

1872, or seven years after the close of the civil war, only about 6 per cent of the soldiers of that war had filed claims.

Many claims are filed by those who have been discharged from the service since the fall of 1898 for disabilities alleged to have been contracted in the service, when but a few days prior to the execution of the applications the soldiers had been carefully examined and found to be suffering from no disability whatever. Under the system adopted by the War Department all the volunteer soldiers were required, upon their muster out, to state what disabilities they contracted in service, and they were carefully examined by the officers of the Army to determine their physical condition.

The absence of any signs of disability at discharge does not prevent many soldiers from filing applications for pension through the solicitation of claim agents located at the place of muster out, in which a number of disabilities are set up as a basis for pension.

Many letters, the Commissioner states, are often received from these claimants stating that they did not wish to file the applications, but were persuaded to do so by the claim agents.

The history of one of the volunteer regiments in the war with Spain is cited to show the conditions which promote the filing of claims for pension. This regiment had 53 commissioned officers and 937 enlisted men and served about six months in 1898. Up to June 30, 1901, 477 claims for pension had been filed on account of disabilities contracted in said service.

The Commissioner states that—

> I am not prepared to believe that those who engaged in the war with Spain, many of them sons of the veterans of the civil war, were less patriotic than their ancestors, or that they are more covetous, but in my opinion it is the fault of the system of pensioning, with its active army of attorneys, solicitors, and drummers, practically employed and licensed by the Government to solicit and secure applications for pension with the promise of $25 for each claim that is secured and allowed. No blame or criticism should be attached to the soldiers, as they are importuned and persuaded that it is their duty to file claims whether disabled or not.

The report specifies in detail the defects in the present system of adjudicating pension claims, both with respect to the legal as well as the medical proofs submitted to the Bureau, and makes special reference to the unsatisfactory conditions which result from the present system of medical examinations. The present methods, it is stated, were never satisfactory, and each year adds to the embarrassment which they occasion, claims being mostly adjudicated upon ex parte testimony, and the witnesses can not be cross-examined, except in the few cases that are sent to the field for special examination.

The Commissioner quotes from the annual reports of his predecessors, as far back as 1868, to show that the same unsatisfactory conditions have existed ever since that date with regard to the system of

adjudicating pension claims on ex parte testimony and the reports of examining surgeons made under existing practice.

To obviate the difficulties and dangers of the present system of adjudicating claims for pension and to secure unbiased reports showing the physical condition of claimants for invalid pension, the Commissioner recommends that traveling medical examining boards be constituted, each board consisting of two skilled medical examiners, one attorney, and one stenographer and typewriter. The movements of these boards would be under direction of the Commissioner, and they would meet at the county seat of each county at stated periods, as the demands of the service should require, all applicants being notified fifteen or twenty days in advance of the sitting of the board. If the claim is for original pension, the claimant would appear before the board and all the facts bearing upon his claim would be gathered by the attorney, while the medical examiners would ascertain the degree of his disability, and the claim would come to the Bureau made up in such shape as would give it credit.

If only a question of increase was at issue there need be only a medical examination by the two surgeons.

It is estimated that the cost per annum of each board would not exceed $12,490, and that 17 boards (costing $212,330) would be sufficient to answer all demands for the New England States, New Jersey, Delaware, New York, Pennsylvania, and Ohio, which States have considerably over four-tenths of the soldier population.

The Commissioner expresses the opinion that with 40 or 50 of these boards the work of adjudicating pension claims would be orderly and systematic, and while the cost to the Government and the claimant would be less than under the present system, it would make it easier for the meritorious claimant to establish his claim, and would minimize the chances for the successful prosecution of a fraudulent one. I concur in the conclusions of the Commissioner in the premises, and have to commend his recommendation to the early and favorable consideration of Congress.

The act of June 7, 1888, which repealed all limitations as to date of filing the application in cases of widows of deceased soldiers and sailors, made their pensions commence from the date of death of the husbands, regardless of the time when the application for pension of the widow is filed.

The Commissioner expresses the opinion that this law should at once be repealed, as it is a standing invitation for the filing of fraudulent claims, owing to the large arrearages that become due upon allowances, and cites a number of sample cases which show the vicious effects of the law.

The act of August 7, 1882, provides that marriages shall be proven in pension cases to be legal marriages, according to the law of the

place where the parties resided at the time of marriage or at the time when the right of pension accrued.

The effect of this law has been to deny claimants in many instances the status of legal widowhood, although the equities appear to be in favor of such claimants. I desire to reiterate the recommendation contained in previous reports that Congress so amend the act as to provide for the admission of evidence to prove marriages for pensionable purposes by a standard which will be uniform throughout the entire jurisdiction of the United States. If this is effected many inequalities in the present practice of the Pension Bureau, which is based upon the existing law, will be removed and justice done many worthy claimants.

The act of February 26, 1881, provides that the pensions of inmates of a National Home for Disabled Volunteer Soldiers shall be paid to the treasurer or treasurers of said home, to be disbursed for the benefit of the pensioners. It further provides that any balance of pension which may remain unexpended at the death of an inmate of the home shall be paid to the wife or children, or, in default of either, to his legal representatives. The effect of this law is to create a class of beneficiaries new to pension legislation, and results in the payment of a Government bounty to persons who, as a matter of fact, have no just claim thereto. The law, in my judgment and in that of the Commissioner, should be so amended as to provide for the payment of the balance of the pension money in the hands of the treasurer of the Soldiers' Home at the time of the death of a member, to his widow or children, or, in default of either, the balance shall escheat to the United States.

In the light of further experience, I beg to earnestly repeat the recommendation in my report of last year (pp. 62–63) that legislation be had providing for the adjudication by the Court of Claims and the Supreme Court of the United States of a limited number of test pension claims involving difficult and important questions of law, thereby establishing judicial precedents for the guidance of the Commissioner of Pensions and Secretary of the Interior. A careful study of the subject leads to the conviction that the administration of the pension laws is essentially a matter for the executive department, and that it is impracticable to impose upon the judiciary any part of the investigation and disposition of these claims beyond the interpretation of the pension laws in such number of selected and test cases as will insure correct and uniform action by succeeding officers of the Pension Bureau. A bill (S. 4251) introduced by Senator Gallinger in the last Congress has received the approval of the Senate Committee on Pensions, and it is hoped it will be presented again at the next session and receive the favorable consideration of Congress. Exhibit F of the appendix to this report (pp. 259–262) sets forth this bill, the report of the Senate

committee thereon, and certain amendments to the bill proposed by the Grand Army of the Republic committee on pensions.

Desiring to act in harmony with those who, by reason of their army service, might have suggestions and opinions to offer which are entitled to special consideration in connection with pension legislation, conferences were held in my office in January last with representatives of the Grand Army of the Republic, at which were present Messrs. Leo Rassieur, of Missouri, commander in chief; R. B. Brown, of Ohio, chairman of executive committee; John Palmer, of New York; J W. Burst, of Illinois; Charles Clark Adams, of Massachusetts; O. H. Coulter, of Kansas, and A. G. Weissert, of Wisconsin, all members of the Grand Army of the Republic pension committee. The Assistant Secretary of the Interior, the Assistant Attorney-General of this Department, and the Commissioner of Pensions were also present to give the committee and myself any information or assistance which might be requested.

After discussing Senate bill 4251 and another one providing for a separate pension court, those present concurred in the opinion that some legislation along the line proposed in Senate bill 4251 was very desirable, and that the hope of securing it would be greatly enhanced if the Grand Army committee and the officers of this Department would come together upon some common ground and unitedly propose legislation believed by them to be fair alike to the Government and pension claimants. It was then arranged that the commander in chief of the Grand Army of the Republic, on behalf of the Grand Army committee, should go over Senate bill 4251 with the Assistant Secretary of the Interior and the Assistant Attorney-General and formulate, if possible, such amendments as would make the bill mutually acceptable to the Grand Army committee and this Department.

The bill was then gone over with the commander in chief, and such amendments as were suggested by him and insisted upon after discussion were assented to by this Department, and the bill, with these amendments incorporated therein (Exhibit F, p. 261–262 of Appendix), was laid before the Grand Army committee by the commander in chief. Subsequently Mr. Weissert of the committee informed me that, upon full consideration, the committee assented to Senate bill 4251 as thus amended, and authorized me to say that it was acceptable to them, but that, owing to a resolution adopted by the Grand Army of the Republic at its then last annual encampment, calling for the creation of a separate pension court, the committee was not at liberty to give the bill their formal approval.

In previous annual reports the desirability of the enactment by Congress of a law providing for the payment of a specific fee to attorneys in claims under the act of March 3, 1899 (30 Stats., 1379), for division

of pension, as well as in claims for accrued pension, was adverted to. In discussing the necessity for legislation of this character I stated:

The act of July 4, 1884 (23 Stat. L., 98), and the supplementary acts of March 19, 1886 (24 Stat. L., 5), June 27, 1890 (26 Stat. L., 182), March 3, 1891 (26 Stat. L., 1081), and August 5, 1892 (27 Stat. L., 348), contain provisions regulating the compensation of attorneys and agents for "services in prosecuting a claim for pension," and, subject to certain specified restrictions, clothe the Commissioner of Pensions with a supervision over the allowance of such compensation and direct that, when "such pension * * * claim shall be allowed," such compensation shall be paid by the Commissioner of Pensions directly to the attorney or agent out of the pension money. The manifest purpose of this legislation is to protect pension claimants from unreasonable charges on the part of attorneys and agents engaged in securing the allowance of their claims.

This legislation is, however, limited to regulating compensation for "services in prosecuting a claim for pension," and does not extend to compensation for services rendered in other pension proceedings which do not in themselves constitute the prosecution of "a claim for pension." This has been sharply called to the attention of the Department in different ways. One of these is in connection with the administration of section 4766 of the Revised Statutes and the amendatory act of March 3, 1899 (30 Stat. L., 1379). This section, as amended, relates to the payment of pension money after the claim has been allowed, but has nothing to do with the allowance of the claim itself. It provides for enforcing a division or distribution between a pensioner and his wife or children, in certain enumerated contingencies, of the money accruing upon his pension.

The granting of an application by a wife or children for the division or distribution of such pension money is not the allowance of a pension; does not require the issuance of a pension certificate; will not increase the amount of moneys to be paid by the Government under the pension laws, and will not make the wife or children pensioners. The husband or father, as the case may be, will still be the pensioner, will still hold the pension certificate, and when the contingency which gives rise for the divided payment of the pension money ceases he will be entitled to receive all moneys thereafter accruing upon his pension.

These applications by wives and children are not, therefore, claims for pension within the meaning of the legislation regulating the compensation of attorneys and agents for services in prosecuting claims for pensions, but are only requests for the divided payment of the moneys accruing upon a pension, the claim for which has theretofore been successfully prosecuted to allowance by the husband or father. Such applications are nevertheless proceedings under the pension laws in which the beneficiaries should receive the same protection against unreasonable charges on the part of attorneys and agents as are otherwise accorded to pension claimants and pensioners. Indeed, the wives or children intended to be benefited by the act of March 3, 1899, are usually less able to protect themselves against such unreasonable charges than are most of the pension claimants who are accorded full protection by the act of July 4, 1884, and the acts supplementary thereto.

Another instance in which it has been shown that the existing legislation regulating the compensation of attorneys and agents is not broad enough occurs in the administration of section 4718 of the Revised Statutes, which provides that where the pensioner or pension claimant dies the accrued pension money shall be paid to the widow or children, if there be such, and if not, shall be paid by way of reimbursement to "the person who bore the expenses of the last sickness and burial of the decedent in cases where he did not leave sufficient assets to meet such expenses." In the United States district court for the western district of Pennsylvania, in the case of United States *v.* Nicewonger (20 Fed. Rep., 438), it was held that an appli-

cation for the payment of accrued pension money, as directed in this section, was not a claim for pension within the meaning of the acts regulating the compensation of attorneys and agents.

That Congress has the power to fix the fees of attorneys and agents for services in securing the allowance of a pension, or in procuring the payment, division, or distribution of any pension money, is fully established by the case of Frisbie *v.* United States (157 U. S., 160, 166), but in the absence of such legislation by Congress, or in those instances which are not covered by Congressional legislation, attorneys and agents may demand and receive from the claimants or applicants such compensation for their services as may be agreed upon. This is shown by the opinion of Mr. Justice Brewer in United States *v.* Kock (21 Fed. Rep., 873), where it is said:

"In the absence of a statute prohibiting it, any man may contract for his services. He is not bound to render them; and, rendering them, he may charge the person seeking those services such fee as they may agree upon."

Under these circumstances I earnestly recommend that the existing legislation regulating the compensation of attorneys and agents for services in pension matters be so amended as to provide that no compensation whatever shall be paid to them directly or indirectly for any service in connection with any claim or proceeding under the pension laws, except such as may, within certain limits fixed by Congress, be allowed by the Commissioner of Pensions and paid from the pension money, as now provided with respect to "claims for pension."

Experience in the administration of pension law during the past year has further demonstrated the necessity for the early enactment of the remedial legislation desired, and I therefore renew my recommendation regarding this subject.

THE COMMISSIONER.—The report of Commissioner Evans should be carefully read by his countrymen in order that they may properly understand the great responsibilities of his office and the exceeding difficulties which he has encountered in faithfully discharging its duties. He has no option, and should have no desire, to do otherwise than conform to the plain direction of the law in the disbursement of the enormous appropriation made for the payment of pensions. The veterans have no more sincere friend than their comrade, the Commissioner, who himself served as an enlisted man in the armies of the Union; and he but maintains and defends the honor of their patriotic service when, refusing to ignore both the letter and spirit of the law, he declines to permit the impostor, whether claimant or agent, to share in the bounty which is provided for the veteran and those dependent upon him.

There has been disbursed on account of army and navy pensions from July 1, 1790, to June 30, 1865, inclusive, the sum of $96,445,444.23, and from July 1, 1865, to June 30, 1901, the sum of $2,666,904,589.23. The disbursements by years on account of pensions and expenses incident to the execution of the pension laws, together with the number of pensioners on the rolls each year since July 1, 1865, is shown in the following table:

Statement showing disbursements for pensions, fees of examining surgeons, cost of disbursement, salaries, and other expenses of the Pension Bureau, and the number of pensioners on the rolls each year since July 1, 1865.

Fiscal year.	Disbursements for pensions.		Fees of examining surgeons.	Cost of disbursement, maintaining pension agencies.	Pension Bureau.		Number of pensioners on rolls.
	Army.	Navy.			Salaries.	Other expenses.	
1866	$15,158,598.64	$291,951.24		[1]$155,000.00	$237,165.00	$15,000.00	126,722
1867	20,552,948.47	231,841.22		[1]155,000.00	308,361.49	27,615.86	155,474
1868	22,811,183.75	290,325.61		[1]155,000.00	366,186.20	31,834.11	169,643
1869	28,168,323.34	344,923.93		[1]155,000.00	366,007.31	43,519.50	187,963
1870	29,043,237.00	308,251.78		216,212.86	333,660.00	51,125.00	198,686
1871	28,081,542.41	437,250.24		431,720.03	372,378.97	58,980.00	207,495
1872	29,276,921.02	475,825.79		457,379.51	436,315.71	57,557.78	232,189
1873	26,502,528.96	479,534.93		456,323.99	456,021.28	90,855.39	238,411
1874	29,603,159.24	603,619.75		447,693.17	444,052.24	75,048.72	226,241
1875	28,727,104.76	543,300.00		444,074.79	464,821.21	73,799.35	234,821
1876	27,111,309.53	524,900.00		447,702.13	468,577.89	98,798.88	232,157
1877	27,659,461.72	523,360.00	$66,824.42	455,270.05	445,202.08	67,102.78	232,104
1878	26,251,725.91	534,283.53	234,968.26	318,194.37	443,096.56	41,240.90	223,998
1879	33,109,339.92	555,089.00	86,538.50	203,851.24	493,265.70	51,088.70	242,755
1880	55,901,670.42	787,558.66	75,547.00	221,926.76	582,517.84	55,035.68	250,802
1881	49,419,905.35	1,163,500.00	116,737.00	222,295.00	680,565.45	46,162.19	268,830
1882	53,328,192.05	984,980.00	232,595.87	234,544.37	868,113.92	130,981.85	285,697
1883	59,468,610.70	958,963.11	341,186.49	285,620.20	1,723,285.68	241,555.83	303,658
1884	56,945,115.25	907,272.22	262,066.32	303,430.61	1,936,161.65	553,522.42	322,756
1885	64,222,275.34	949,661.78	482,181.13	275,976.55	2,122,926.54	511,492.12	345,125
1886	65,034,642.90	1,056,500.00	492,714.76	294,724.14	1,948,285.80	509,291.91	365,782
1887	72,464,236.69	1,288,760.39	1,106,324.92	248,280.42	1,968,509.66	420,195.91	406,007
1888	77,712,789.27	1,257,712.40	845,143.61	263,109.87	1,986,027.55	420,776.24	452,557
1889	86,996,502.15	1,846,218.43	787,301.72	278,902.20	1,978,119.98	422,554.50	489,725
1890	103,809,250.39	2,285,000.00	895,677.62	292,697.35	1,957,725.43	380,281.73	537,944
1891	114,744,750.83	2,567,939.67	1,640,993.76	380,360.14	2,301,724.80	377,560.74	676,160
1892	135,914,611.76	3,479,535.35	1,725,597.47	500,122.02	2,494,123.87	178,823.44	876,068
1893	153,045,460.94	3,861,177.00	1,657,628.30	519,292.95	2,460,044.50	230,766.67	966,012
1894	136,495,965.61	3,490,760.56	672,678.50	517,430.37	2,403,522.75	370,344.69	969,544
1895	136,156,808.35	3,650,980.13	807,767.33	562,449.86	2,461,890.50	501,912.52	970,524
1896	134,632,175.88	3,582,999.10	672,587.47	565,627.85	2,258,959.35	494,800.94	970,678
1897	136,313,914.64	3,635,802.71	678,395.44	572,439.41	2,262,597.70	474,359.52	976,014
1898	140,924,518.71	3,727,531.09	894,249.08	536,629.84	2,251,181.40	429,681.14	993,714
1899	134,671,258.68	3,683,794.27	1,007,636.76	522,496.49	2,151,578.85	465,905.63	991,519
1900	134,700,597.24	3,761,583.41	747,497.80	522,812.16	2,135,542.55	435,854.23	993,529
1901	134,743,790.81	3,787,693.08	844,262.60	525,892.94	2,118,993.20	879,646.70	997,735
Total	2,608,004,258.63	58,900,330.60	17,375,192.13	13,140,883.73	48,696,646.50	8,610,616.60	

[1] Approximate.

The disbursement of $379,646.70 on account of "Other expenses" of Pension Bureau includes $67,400.93 for stationery, printing, and binding, repairs to Pension building and contingent expenses. The statement of years prior to 1899 does not include these items. The disbursement on account of Army and Navy pensions from July 1, 1790, to June 30, 1865, is $96,445,444.23.

PENSION APPEALS.

The report of the Assistant Secretary shows that on the 1st day of July, 1900, there were pending 15,864 appeals and motions for reconsideration.

During the fiscal year ending June 30, 1901, there were filed 6,955 appeals and motions, and 6,299 cases were disposed of, leaving 16,520 appeals and motions pending on June 30, 1901.

Of the number of cases disposed of, the adverse action of the Bureau of Pensions was reversed in 569 cases.

There were dismissed 655 cases on the report of the Commissioner of Pensions that for various and satisfactory reasons he had receded from his former adverse action.

The issues presented in the numerous appeals are diverse in character and involve many varied questions, legal and medical, arising under different existing laws.

Appealed cases are carefully reviewed by the members of the board of pension appeals under the personal supervision of the Assistant Secretary, with the view of finally and justly disposing of the pending issues in the light of the evidence and under the provisions of law.

The salutary result of this critical examination is apparent in the large reduction of the number of motions for reconsideration.

PATENT OFFICE.

The report of the Commissioner of Patents upon the business of the Patent Office for the fiscal year ended June 30, 1901, shows that there were received during that year 42,082 applications for mechanical patents, 2,368 applications for designs, 101 applications for reissues, 1,860 caveats, 2,312 applications for trade-marks, 1,036 applications for labels, and 176 applications for prints. There were 26,481 patents granted, including reissues and designs; 1,826 trade-marks, 824 labels, and 124 prints were registered. The number of patents that expired was 20,690. The number of allowed applications which were by operation of law forfeited for nonpayment of the final fee was 4,288. The total receipts of the office were $1,408,877.67; the total expenditures were $1,288,970.13, and the surplus of receipts over expenditures, being the amount turned into the Treasury, was $119,907.54.

The volume of work of the Patent Office has reached unprecedented figures, and the regular character of its increase indicates that it is likely to continue. This large volume of work has necessitated a considerable portion of the examining divisions working until 5 o'clock, and it is evident that the work can only be successfully kept up with reasonable promptness by an increase of office force. The Commis-

sioner calls attention to the fact that many of the best-equipped men in the examining corps leave the office to enter other employments, and to prevent this he recommends an increase of salary for the examiners. He also recommends an increase in the clerical force, and asks that the salary paid to stenographers and typewriters be increased to correspond with that paid for similar work in other bureaus. In view of the large surplus of receipts over expenditures, it seems that a part of this surplus could be well employed in bettering the facilities which this office affords inventors.

The Commissioner earnestly urges the necessity for more room for the Patent Office, and suggests that if it were furnished it would take the place to some extent of an increased force in more economical methods of work.

There is a necessity for steel book stacks in the scientific library in addition to those provided for by the last Congress. An appropriation of $2,500 would be sufficient for this purpose. The appropriation for the purchase of books is inadequate and should be increased.

THE TWELFTH AND PRIOR CENSUSES.

The Director of the Twelfth Census reports that the work of tabulating the results of the field work of the enumerators and special agents of the Twelfth Census has progressed with reasonable celerity. Much difficulty has been experienced, however, and more or less delay caused by the reduction of the clerical force, owing to the absence of employees from either illness or annual leave.

The law provides that the four principal reports shall be placed in the hands of the public by the 1st of July, 1902, and this requirement has rendered it absolutely necessary to maintain a clerical force adequate to complete the work within the prescribed period. The statisticians made estimates of the time needed to finish the particular branch assigned to each of them, but the plans so submitted have been greatly interfered with owing to the absence of clerks from duty. The officials of the office believe that their allotted task will be completed in ample time. It was hoped that by the 1st of November a large number of employees could be dispensed with, but inasmuch as the work has been retarded, owing to the difficulty of maintaining the clerical force at its maximum, it is not likely that there will be any material reduction until after the first of the year.

Out of the large number of agents employed in the census field work, about 55,000 in all, it was hardly to be expected that there would not be some who would prove incompetent and unfaithful to duty, and several cases of violation of the law occurred. The Director has endeavored to enforce the census act to the letter and, through the

assistance of the Attorney-General, has proceeded against all offenders, with satisfactory results.

The cost of the Twelfth Census from November 1, 1900, to October 31, 1901, both dates inclusive, is $3,504,959.49. The estimated amount required for the expenses of the Twelfth Census for the fiscal year beginning July 1, 1902, and ending June 30, 1903, is $1,972,120.

The National Conference of Charities and Corrections at its last annual meeting discussed the question of the establishment of a national bureau of charities and corrections, the work to be done under Federal supervision, preferably by the Census Bureau. At present the information is gathered by the several States, but their methods are so varied that the results can not be safely used for the purpose of comparison. The Director is doubtful as to whether the present law vests sufficient authority in him to do all the work required in connection with such an inquiry. He states that his power, however, seems to be limited to institutions, and might not be held to cover statistics of associations, the results of whose work are necessary to a complete view of the situation. Neither does the law appear to authorize the payment to institutions, societies, or courts for such information and transcripts of records as may be most economically obtained by this means. The law should be amended so as to leave no doubt on these subjects.

PERMANENT CENSUS BUREAU.—The action of this conference indicates a demand for exact statistics, which will doubtless be continued along other lines. The great accuracy and care required in securing and handling statistical data of all kinds can be obtained only through the medium of experienced and competent persons. The present system of organizing a census office every ten years does not permit of the keeping together of skilled statisticians, experts, and trained clerks, or of keeping open channels of statistical information. The remedy which naturally suggests itself is the establishment of a permanent census bureau with a limited force which could be increased as the work of preparing for a new census is entered upon or diminished after the census is taken. The establishment of the census as a permanent bureau would undoubtedly be in the interest not only of economy and statistical science, but would result in more efficient work generally and permit of the early publication of the statistical data compiled.

PRIOR CENSUSES.

The records of the First, 1790, Second, 1800, Third, 1810, Fourth, 1820, Fifth, 1830, Sixth, 1840, Seventh, 1850, Eighth, 1860, Ninth, 1870, Tenth, 1880, Censuses, inclusive, are bound in book form and stored in the Patent Office building. Those of the Eleventh, 1890, Census, which as yet have not been bound, were removed during the

year from Marini's Hall, E street, between Ninth and Tenth streets NW., where accommodations had formerly been provided for them, to the Union Building on G street, between Sixth and Seventh streets NW. The space procured in the latter building is ample for the purpose for which desired; the building is dry, well lighted, etc. During the year considerable progress has been made in arranging and indexing the population schedules of the Census of 1800. This work is necessarily slow, owing to the condition of the schedules themselves and of the haphazard manner in which they were bound, coupled with the fact that frequent reference must be had to the works in the Congressional Library for reliable information as to the municipal subdivisions of the States at that time.

The necessary care, attention, and repair required to prevent further deterioration of these valuable original manuscript records of the population of the country has been given, and information compiled therefrom has been supplied to a large number of applicants throughout the United States for court and other purposes. The population and other schedules of the Eleventh, 1890, Census are still unbound, and in their present condition require the greatest care in handling to prevent mutilation or loss of the various schedules. In discussing this matter in my last annual report, I stated that—

* * * the schedules in question were, under the direction of the Department, grouped numerically by supervisors and enumerators' districts, made up in packages, placed between cardboard covers, and tied up with twine. They were then piled flat in racks, and remain in that condition to the present time. Subsequent experience has demonstrated the adoption of this method of providing for the care of these population schedules in lieu of permanent binding to have been unwise. The arrangement of these schedules by districts, as above stated, conveys no idea of locality, and thus, together with the arrangement in racks, makes it practically impossible, except with great loss of time and labor, to refer to the returns from any particular place without going through the whole contents of a rack, untying and examining the sheets. It has frequently been necessary to examine from thirty to forty of these packages or portfolios in order to find a certain address, whereas if bound the possibility of mutilation or loss of family schedules would be reduced to a minimum and the contents of each bound volume could be readily ascertained from the back title lettering thereon.

During the past year it has been necessary to handle these family schedules many times, at a great loss of time and labor, owing to their present arrangement and condition. They should be bound at the earliest possible date, and I earnestly recommend that suitable appropriation be made by Congress to provide for the binding of these records. A special estimate of $15,000 for beginning the work of arranging and binding will be submitted through the proper channels at an early date.

As stated in my last annual report, existing laws make no provision for the exaction of a fee for furnishing copies, certified or otherwise, of

the records of the Department other than those relating to the Patent Office and to the General Land Office. A large amount of money is annually lost to the Government by reason of the absence of such legislation, and I therefore renew my recommendation for the enactment of a law by Congress authorizing the Secretary of the Interior, in his discretion, to charge a fee of 10 cents a hundred words for copies, certified or otherwise, of the public records in all cases where such authority is not conferred by existing law.

THE GEOLOGICAL SURVEY.

Plans for the work of the Geological Survey, comprising the operations of the Geologic, Topographic, Hydrographic, and Forestry branches, were approved by me on June 14, 1900. These plans provided for the well-established work of the Survey in the United States and Alaska, including cooperation in topographic, geologic, and hydrographic surveys with those States which had made arrangements therefor by legislation or through appropriate action of qualified State officials. In addition to their regular duties officers of the Survey have, with my approval, been engaged in cooperation with the Census Office and in promoting the purposes of the Pan-American Exposition in the departments of minerals, mining, and graphic arts.

GEOLOGIC BRANCH.—During the year the Geologic branch was reorganized according to a plan which distinguishes between supervision in scientific lines and executive control of plans and expenditures. The latter remains, as heretofore, entirely in the hands of the Director, but to secure results of the highest value in science he has committed the supervision of the work in special lines to geologists whose reputations command for their views the highest respect. In this reorganization the claims of economic geology are recognized by the appointments of a geologist in charge of investigations in metalliferous ores and of another in charge of studies in nonmetalliferous deposits.

Forty-four geologic and seven paleontologic parties have operated in the United States, Alaska, and Cuba. In the main the work proceeds along established lines, the plans being controlled by a broad policy, whose purpose is to advance the development of the country by accumulation and publication of reliable scientific and practical data. Each of the great geologic districts of the country receives attention. The Atlantic Coastal Plain, the Appalachian Mountains from New England and New York to Georgia, the Appalachian coal field from Pennsylvania and Ohio to Alabama, the glaciated regions of the northern Central and Western States, the Mississippi Valley especially in reference to the occurrence of zinc, the iron-ore districts of Lake Superior, the Great Plains and Texas for artesian waters and other

resources, the Rocky Mountain province, in which general surveys are supplemented by special investigations of the best developed or most promising mining districts, the Great Basin region of Oregon and Nevada, and the mountain ranges of the Pacific slope from Washington to California. Oil and gas having excited much popular interest during the year, the Survey has been called upon for many investigations of supposed promising fields, and has responded so far as was practicable without detriment to established plans.

In Alaska topographic and geologic surveys were made, in 1900, of two general regions: (1) The southern portion of the Seward Peninsula, including the Nome district, and (2) the Chitina copper district of the Copper River region. In the Seward Peninsula one part of the results of the season's work was a geologic and topographic reconnoissance of about 7,500 square miles and a study of the occurrence of placer gold on nearly 100 creeks, included in nine different districts. The most important conclusion reached is that there is a second belt of gold-bearing rocks about 30 miles north of the Nome region proper. Another part of the work in the Seward Peninsula was a reconnoissance of the eastern portion, along streams tributary to Norton Sound. The work was both topographic and geologic, and resulted in a satisfactory report on the geology and resources of the area from Fish to Koyuk rivers. The Copper River party proceeded via Valdes to the Chitina and made a topographic and geologic survey of the Chitina Valley and its tributaries. The report deals especially with the occurrence of copper deposits.

The results of these Alaskan surveys were published by special authority of a resolution of Congress.

Plans for exploration of northwestern Alaska had been initiated in 1900 and supplies and equipment forwarded to Bergman, on the Koyokuk River. To carry out these plans, parties left Washington during the winter and spring of 1901 to proceed via the Upper Yukon to Bergman. Thence one started out northward to cross the divide and descend the Colville drainage to the Arctic Ocean, while another party went west to the Kowak River, which was to be followed to Kotzebue Sound.

Later in the spring a special investigation of the mineral resources and geology of southeastern Alaska was begun.

In consequence of representations made to the State Department regarding uncertainty as to the position of the northwest international boundary between Canada and the United States, the forty-ninth parallel, from the divide of the Rocky Mountains to Puget Sound, the Director of the Geological Survey was instructed to cooperate with the Superintendent of the Coast and Geodetic Survey in the organization of parties whose duty it should be to determine provisionally the true position of the boundary for certain short sections of the line

where disputes had arisen, and also in arranging for a geologic reconnoissance of the entire stretch west of the divide of the Rocky Mountains. These instructions were complied with, and parties entered the field in June to execute the above-described surveys.

In the spring, on request of Maj. Gen. Leonard Wood, transmitted to me through the War Department, two geologists and one paleontologist were sent to Cuba, without expense to this Department, with instructions to make a reconnoissance of the economic geology of the island.

TOPOGRAPHIC BRANCH.—Of the regular detailed topographic mapping, 35,123 square miles, in 32 States and Territories, were completed within the year, making a total to April 30, 1901, of 866,847 square miles. The area of the country being 3,024,880 square miles, it will be seen that the completed portion is about 29 per cent of the whole. In Alaska about 6,500 square miles were mapped topographically.

EXAMINATION AND SURVEY OF FOREST RESERVES.—In the forest reserves the examination of the timber and the running of boundary lines were continued, and 6,543 square miles were mapped. As usual, a volume giving information in relation to the various forest reserves has been prepared. By recent act of Congress authority was given the Department of Agriculture to make an examination of the forests of the southern Appalachian region, with a view to the establishment of an Appalachian forest reserve. I detailed a specialist connected with the Geological Survey to assist in the work. During the season examinations were made of almost the entire mountain region of North Carolina, together with adjacent portions of South Carolina, Georgia, and Tennessee, an irregular area comprising approximately 6,000 square miles. The results are of special interest, because the examinations on which they are based are the first made on an extended scale in the mixed forests of the East.

DIVISION OF HYDROGRAPHY.—The measurement of rivers in various parts of the United States and the investigation of underground currents and artesian wells in arid and semiarid sections have been carried on systematically as in former years. The results are shown in the volume on hydrography and in a number of water-supply and irrigation papers, the edition of which falls far short of the popular demand. This work is essentially a combination of geologic and hydraulic engineering, requiring experts who are familiar with various phenomena of the earth's surface, their operations being supplemented and rounded out by equally skilled and experienced engineers.

The demand for information concerning the hydrography of the United States is steadily increasing as the water resources become more largely appreciated and attempts are made to utilize them in agriculture and in various industries as well as for municipal and domestic supply. There is no other mineral whose economic value is so

great and whose distribution is so widespread, yet offering such limitations in the western sections of the country, since economic use must depend largely upon storage. The variations of water supply are so great from season to season and from year to year that measurements of volume must extend over a considerable period before the results have their full value and permit developments to be made with assurance of success.

In the eastern part of the United States the measurement of rivers available chiefly for water power and to a certain extent for municipal supply has been rapidly extended, largely in cooperation with various local officials, State appropriations having been made to supplement the work being done by the National Government. The hearty support thus given, financially and otherwise, testifies to the appreciation of the value of the results to many industries.

In the South public interest has been aroused in the proposed creation of a national park or reserve to include the headwaters of the principal rivers of that part of the country. In order to obtain data bearing upon river flow and the protection of this afforded by the forests, systematic measurements have been made of the rivers in the southern Appalachian region and estimates prepared of the power utilized and available.

In the West there is even still greater demand for stream measurements and for facts concerning underground waters, since all land value rests to a large extent upon ability to obtain a sufficient supply of water. This results from the fact that there is far more good agricultural land than can be irrigated. The cost of fuel is also high, and many industries, notably various branches of mining, are dependent upon water power, with or without electrical transmission.

Besides determining the flow of the streams, much attention has been given to the preparation of reports upon the best methods of utilizing the water resources of the West. For this purpose detailed surveys have been made of the feasibility and cost of water storage and the diversion of large rivers. One of the most important projects examined is that of a large dam for water storage near San Carlos, Ariz., on the Gila River, to restore the supply of the Indians taken away by the encroachments of the white settlers, and also to reclaim a large extent of vacant public land. Other reservoirs have also been surveyed, notably on the Verde and Salt rivers.

In northern Montana an examination has been made as to the feasibility of bringing the waters of St. Mary River easterly across a low divide, supplementing the flow of Milk River, and thus enabling the settlers to utilize many thousand acres along that stream. In central Colorado similar surveys have been begun, to ascertain the possibility of diverting the waters which now go to waste in Gunnison River and taking them out through a tunnel.

In western Nevada and adjacent portions of California surveys have been made on the headwaters of Truckee and Carson rivers, to ascertain the extent to which water can be stored in the mountains for the reclamation of portions of the Nevada deserts. A number of feasible reservoir sites have been found, and it has been ascertained that large areas in Nevada can be reclaimed at reasonable cost.

Other surveys have been made in the Sierra Nevada, on the headwaters of streams flowing into San Joaquin Valley, and a large amount of information has been brought together, in conformity with the wishes of Congress as expressed in the laws authorizing an investigation of the extent to which the arid lands can be redeemed by irrigation. The application of these facts has a practical bearing upon many industrial problems besides those of reclamation.

IRRIGATION.—In my report for last year attention was called to the importance of providing, through wise administration, for the creation of homes for millions of people upon the arid but fertile public lands. This matter is being given increased attention by the public press and by writers upon the subject, and at the last session of Congress hearings were held by the Committees on Public Lands and on Irrigation of Arid Lands of the House of Representatives.

Briefly stated, the results of the examinations of the extent to which arid lands can be reclaimed by irrigation, made by the committees of Congress, show that while one-third of the United States is still vacant there are relatively few localities where homes can now be made. This is not because the soil is barren or infertile, but on account of the difficulty of securing an adequate water supply. There is water to be had, but this water is mainly in large rivers, from which it can be taken only by great structures, or the supply comes in sudden floods and can not be utilized until great reservoirs have been built. It is impossible for a laboring man or an association of settlers to build these great works.

The pioneer coming to the arid region found many small streams from which water could be taken out upon agricultural land. He was able through his own efforts to irrigate a small farm and to make a home. These easily available waters have been taken, and a man can no longer secure a foothold, although there still remain 600,000,000 acres of vacant land. It is possible, by water storage and by building diversion works from great rivers, to bring water to points where such men can utilize it and can enjoy opportunities similar to those had by the earlier settlers. Unless this is done much of the country must remain barren, and thousands of men and women eager to become independent citizens must remain as wanderers or tenants of others.

Enough work has been done by private capital to demonstrate the fact that water conservation and the diversion of large rivers is practicable, but, like many other works of great public importance, it can not

be made a source of profit. The works of reclamation already constructed have, as a rule, been unprofitable, and capitalists are no longer seeking opportunities for reclaiming desert land when the probabilities are against their receiving an adequate compensation for the risk and labor involved.

The argument has been presented that if the Government will not make it possible to bring water to these lands they should be turned over to the States, but the majority of citizens who have studied the subject are opposed to such action, on the ground that the vacant public lands are the heritage of the people of the United States and should be held for the creation of homes, and not made a subject of speculation, as has almost invariably been the case with lands donated to the States. The whole trend of enlightened public sentiment is in favor of an expansion of industries and commerce internally through wise action by the National Government rather than attempting to get rid of the duties and opportunities of ownership by giving away this valuable property.

Two distinct conditions are to be clearly distinguished in the problem of water conservation for the development of the West. On the one hand, there are localities where the agricultural lands along the rivers have been brought under irrigation and there is a demand for water to an extent far exceeding the supply, and where all of the flood water, though stored, would not suffice to satisfy the demands of the lands now partly tilled. The other contrasting condition is where there still remain vast bodies of public land for which water can be provided by means of reservoirs or by diversion from large rivers whose flow can not be used. Here the construction of works of reclamation in no way affects lands now in private ownership.[a] Between these two extremes are all varieties of intermediate conditions, but these may be arbitrarily classed with one or the other.

In the first case reservoirs, if constructed, must be treated in the same way in which other public works having to do with rivers and harbors are managed. The water conserved should be used to increase the flow of the stream during the season of drought, regulating the volume so that it can be utilized to the best advantage, according to the laws and customs prevailing in the locality. This is comparable to the conditions where the outlet of a harbor has been improved without reference to the benefits to the owners of the docks around the shores.

Under the other condition, where there are unappropriated waters flowing to waste which can be brought within reach of public land, it is possible to make provisions such that the Government can be reimbursed for its expenditure. The lands to be benefited by such works should be reserved for homestead entry only in small tracts, each being subject to the payment, before the title is finally passed, of a sum equivalent to the cost of storing or conserving the water, such

payment to be made, if desired, in installments extending over a number of years.

Water should be brought to the point where the settlers can, with their own labor or by cooperation, construct ditches and laterals to reclaim the desert land. The conditions in this case would be comparable to opening a rich tract of land hitherto reserved. The moment the Government throws down the desert barriers, or announces its purpose of so doing by making possible the obtaining of water, there will be an eager rush on the part of home seekers. With the requirement of actual settlement and cultivation, to be followed by the payment of the cost of storing water, the speculative element will be eliminated, leaving the ground free to bona fide settlers.

It is safe to predict from the recent struggles for homes upon the public domain that if it should be determined that the San Carlos dam, for example, is to be built by the Government, every acre of vacant land to be supplied with water would be immediately taken in small tracts by men who would not only cultivate the ground when water is had, but in the meantime would be available as laborers in the construction of the works, and would ultimately refund to the Government the cost of the undertaking. In this manner thousands of the best class of citizens in the country would be permanently located in prosperous homes upon what is now a desert waste.

It has been estimated that the western half of the United States would sustain a population as great as that of the whole country at present if the waters now unutilized were saved and employed in irrigating the ground.

The first step in water conservation has been taken by Congress in giving authority for setting aside great areas of wooded land, largely for the beneficial influence which they exert upon the water supply. This should be followed by the construction, within the forest reserves, and elsewhere when practicable, of substantial dams impounding flood and waste waters.

Underground waters may be had in some localities where it is not practicable to irrigate the surface by means of stored water. The conditions favorable for artesian wells are believed to exist in a number of desert areas, and it is probable that important sources of supply can be had by artesian wells. The division of hydrography has begun the systematic study of some of these places, and has prepared maps showing the depth beneath the surface of the water-bearing rocks. Such maps are invaluable in the development of the country. These can be prepared for the edges of the artesian basins, where the rocks are partly upturned, but far out from the mountains it is necessary to sink test wells. If these are properly located after thorough study of all the surrounding conditions, it may be possible to settle the question of artesian supplies and definitely outline the under-

ground condition for hundreds of square miles of public land. Only by obtaining such information can the value of this and the practicability of settlement be made known. It is highly important, therefore, that a few such deep wells be drilled by the Government upon desert land, for the purpose of demonstrating the possibility of reclamation. When it has been proved that water can be had, even at considerable depths, settlement will follow.

There is no function within the power of the Government higher than that of making possible the creation of prosperous homes. In his speech at Minneapolis, Mr. Roosevelt said: "Throughout our history the success of the home maker has been but another name for the upbuilding of the nation." The remaining public lands are the heritage of the nation and should be held for homes, being reserved for actual settlers under the homestead act. The area to be taken by any one man should be reduced so that when water has been conserved by the Government the homestead shall, in certain parts of the country, be limited to 80 or even 40 acres.

The investigations of the Government experts have shown that, for example, in Arizona, where high-class fruits are cultivated, a family of five can obtain a good living upon 40 acres, or even 20. In the colder parts of the arid region, where forage crops are largely raised, the area may be made 160 acres.

The water for irrigation should be distributed in conformity with the laws of the State and without interference with any vested rights which have already accrued.

Where reservoirs or main-line canals are built by the National Government to furnish water for the public lands, the administration should proceed in harmony with the State laws, as would be the case with any other large landowner—State and nation cooperating to accomplish a result of far-reaching benefit to both.

The expansion of our interior trade and commerce, through the settlement of the arid lands and the increase of population in the West, would benefit every class and section of our country in the same way that the settlement of the Ohio and Mississippi valleys has brought prosperity and wealth to the States east of the Alleghenies. The settlement of the vast arid region still farther to the west would benefit the whole eastern half of the United States by creating new home markets for Eastern merchants, Southern cotton growers, and all manufacturers. It would enormously increase local traffic, and would tend to relieve the congestion of our great centers of population, creating opportunities which would go far to allay social discontent. It would promote industrial stability by giving to every man who wanted it a home on the land. The rush for lands in Oklahoma testifies that there are a multitude of our people who will make great sacrifices to secure such homes.

There need be no fear of competition of Western products with Eastern agriculture, since the Asiatic markets now opened will absorb the surplus of the Western farms. The character of these is also such that the staple crops of the East can not now go to the remote West, nor those of the West come East, excepting in the case of semitropic and dried fruits.

The investigations which have been carried on demonstrate that, looking at the matter from all sides, *there is no one question now before the people of the United States of greater importance than the conservation of the water supply and the reclamation of the arid lands of the West, and their settlement by men who will actually build homes and create communities.* The appreciation of this condition is shown by the fact that both the great political parties inserted in their platforms articles calling attention to the necessity of national aid for the creation of homes on the public domain.

In view of the facts above noted it is imperative to adopt at an early date a definite policy leading to the best use of the vacant public lands. It is recommended that construction be at once begun upon certain property where the conditions are known to be such that beneficial results will follow. Out of the large number of localities examined it is suggested that the following be considered; surveys, plans, and estimates having been prepared:

The San Carlos storage reservoir in Arizona, reclaiming 100,000 acres or more of public land at an estimated cost of $1,040,000.

The construction of reservoirs in the Sierra Nevada in California for reclaiming desert lands in Nevada.

The diversion of St. Mary River into the headwaters of Milk River in Montana.

It is further urged that the appropriation for continuing the surveys and investigations by the division of hydrography be increased to an amount commensurate with its importance, *the sum of $250,000 being needed to carry on the work in hand.*

MINING AND MINERAL RESOURCES.—As stated in my last report, the duties of this division of the Survey have been enlarged. Examination of the conditions of occurrence of the precious metals has been begun. A list of the gold and silver mines of the United States is being compiled, supplemented by all obtainable information concerning the characteristics of each mine. During the next year statistics supplementary to those given in the report of the Director of the Mint will be collected and published. These figures will show the amount and value of the gold and silver produced in the United States, separating that produced at placer and that produced at deep mines. Cooperating with the division of economic geology, this division has investigated the conditions of occurrence of some important economic minerals, particularly asphaltum, petroleum, borax, and salt, and has had pre-

pared a series of eleven papers on the coal fields of the country, which will appear in Part III of the Twenty-second Annual Report of the Survey.

The value of the mineral products of the country in the calendar year 1900 exceeded $1,000,000,000, being an increase of nearly $100,000,000 over 1899 and eclipsing all records in our history. This value was almost equally divided between the metallic and the nonmetallic substances. The increases were general throughout the different branches of the mineral industry.

PHYSICAL AND CHEMICAL LABORATORIES.—Good progress has been made in the organization and equipment of a physical laboratory. Such instruments as are not procurable in this country have been ordered from abroad. Some valuable electric measuring instruments are now being made for the Survey in Germany, under the courteous supervision of officials of the Physikalisch-Technische Reichsanstalt, of Charlottenburg. An excellent storage battery has also been installed. A large part of the work of the chemical laboratory necessarily consisted of analyses made to aid the geologists in their determinations and mapping. During the year 187 analyses were reported as complete, besides 360 qualitative determinations of ores, minerals, etc. Notwithstanding the incomplete condition of the physical laboratory, and the large amount of routine work demanded of the chemical laboratory, a number of very interesting experiments and investigations were made within the year, which are set forth in the report of the Director.

PUBLICATIONS.—The number of publications naturally grows with the expansion of the Survey. The figures representing the work done in the editorial division during the year are as follows: Manuscript pages edited, 22,111; final pages of proof read and corrected, 9,469; pages indexed, 6,602. In addition 12 geologic folios were completed, and at the close of the year the maps for 10 others were in various stages of engraving; while of topographic atlas sheets, 87 were published or were in press and 25 were in process of engraving. During the year 138,631 volumes, 42,936 folios, and 327,603 maps were distributed.

A number of papers prepared during the year and already published or in press are of such a nature as to appeal strongly to the people, and have therefore been in great demand. Among these are, besides the Alaska reports already mentioned, reports on the asphalt and bituminous rock deposits of the United States, on the lead and zinc deposits of the Ozark region, on the oil and gas fields of the western interior and Texas regions, and the series of papers mentioned above, which summarize knowledge of the various coal fields of the country.

COOPERATIVE SURVEYS.—Investigations and surveys made by the national survey within any State are of direct benefit to the State;

and, in like manner, such work done by a State survey, if of proper quality, can be utilized by the Federal survey. Accordingly, ever since the United States Geological Survey was organized, in 1879, there has been an endeavor on the part of the Director and of the State geologists to promote the common purpose of advancing knowledge and aiding development. The first definite agreement was entered into in 1884, between the Director and the board of commissioners of Massachusetts, for sharing equally the expenses of the topographic work in the State. Under terms varied to suit the conditions of each special case, agreements involving cooperation of some sort have been made with the State officials of Maine, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Maryland, West Virginia, North Carolina, Georgia, Alabama, Ohio, Wisconsin, Colorado, North Dakota, Nevada, and Idaho. These agreements have related chiefly to topographic work, but now that the topographic base is well advanced, similar agreements governing joint work in geology and hydrography have recently been entered into with various States. Thus the work as a whole is greatly expedited and there results a considerable saving to both national and State treasury.

EDUCATION.

The Commissioner of Education presents some interesting statistics and general information regarding the status of education in the country.

The total enrollment in all schools, elementary, secondary, and higher, public and private, during the year was 17,020,710 pupils, an increase of 282,348 over the previous year; the enrollment in public institutions supported by general and local taxes was 15,443,462; including special institutions, such as evening schools, Indian schools, schools connected with asylums, reform schools, and other institutions more or less educational in character, increases the total enrollment by half a million pupils.

About 21 per cent of the population of the United States attend some school supported by taxation, while but 2 per cent attend private schools. There has been a notable increase in the number of public high schools throughout the country; 2,526 were in operation in 1890, which increased to 6,005 in 1900. In the North Atlantic States in 1890 there were 786, and in 1900, 1,448. In the South Atlantic States in 1890 there were but 115 high schools, whereas in 1900 they had increased to 449. The South Central Division of States shows a still greater ratio of increase, their public high schools being 156 in number in 1890 and 675 in 1900; the Western Division of States increased from 91 high schools to 270 in the same period; the North Central Division of States in 1890 and 1900 had more than half of the high

schools in the country, the increase being from 1,376 to 3,163. The enrollment of high-school pupils in 1890 was, in round numbers, 203,000, and in 1900 it had increased to 520,000. Notwithstanding this great increase in the pupils at public high schools, private schools of the same rank as these high schools increased their enrollment during the same period from 94,931 to 110,797.

These facts show a uniform consensus of public opinion throughout the nation in favor of providing secondary education at public cost.

The number of teachers employed in the common schools is reported as follows: Male teachers, 127,529; female teachers, 293,759—a total of 421,288. Number of schoolhouses, 247,321; value of school property, $538,623,736.

Number of students in colleges and universities is given as follows: Preparatory, 47,658; collegiate, 77,085; graduate, 5,179—total, 129,922. Total income of institutions, $20,836,488. Students in colleges and seminaries for women which confer degrees: Preparatory, 7,487; collegiate, 15,467; graduate, 411—total, 23,365.

In professional and allied schools, students, 69,234; graduates, 16,948. Medical students, 25,213; graduates, 5,219. Enrollment in special schools (city evening schools, business schools, Indian schools, etc.), 524,531.

The various divisions of the Bureau accomplished a large amount of work during the year. The statistical division sent out 50,277 copies of forms of inquiry during the scholastic year ending June 30, 1901. Twenty-six different schedules were necessary for the collection of the statistics usually tabulated in the office. Statistical returns prepared for tabulating, 26,705; computations made, 42,576. The number of books in the library, June 30, 1901, is reported as 84,676; pamphlets, 135,000; number of books received during the year, 2,804.

Education in Alaska.—During the year 25 public schools have been maintained in Alaska under the immediate supervision of the Commissioner, with 31 teachers and an enrollment of 1,681 pupils. In addition to supporting the above public schools, payment is made of the salaries of 5 teachers in the Sitka industrial school, which has an enrollment of 151.

During the autumn of 1900 an epidemic of pneumonia prevailed through Arctic Alaska, causing many deaths among the native population. In order as far as possible to prevent the starvation of the stricken people the Commander of the Revenue Cutter *Bear*, gave out provisions among the settlements along the shores of Bering Sea, which were distributed by the missionaries, teachers, and officers in that region. At Port Clarence many of the children whose parents had died were gathered into an orphanage established by the teacher. In the spring of 1901 smallpox made its appearance among natives of southeastern Alaska and spread with great rapidity. As a precau-

tionary measure several of the public schools in that section were closed during the prevalence of the disease.

The appropriation of $30,000, usually made in the sundry civil bill for education in Alaska, which had been continued annually since 1886, was not renewed by the last session of Congress. In lieu thereof, in compliance with the recommendation of the Department, Congress, by an act approved March 3, 1901, amended section 203, Title III, of the "Act making further provisions for a civil government for Alaska" (approved March 3, 1901), by providing that 50 per cent of all license moneys that may hereafter be paid for business carried on outside of incorporated towns in the district of Alaska shall be set aside to be expended, within the discretion and under the direction of the Secretary of the Interior, for school purposes outside incorporated towns in said district.

Detailed reports from the clerks of the several district courts in Alaska as to receipts under this law have not yet been received, and it is not possible to state at present whether the funds received from this source will be sufficient to maintain the Alaska school service on the same footing as heretofore.

During the fiscal year the towns of Nome, Treadwell, Eagle, and Valdez have incorporated, and the schools in those places (and in Skagway, Juneau, and Ketchikan, which had previously incorporated) are now under the care of local authorities.

There has been progress in the reindeer enterprise during the year. The total number of domestic reindeer now in Alaska is 4,166, in nine herds, which are distributed from Point Barrow, in latitude 71° 23′, to Eaton Station, near St. Michael, above the mouth of the Yukon River.

The epidemic which prevailed among the natives in northeastern Siberia, bordering on Bering Strait and the Arctic Ocean, during the summer of 1900 made the procuring of reindeer from that region exceedingly difficult. Accordingly it was decided to secure a number of the larger breed of reindeer from the hitherto unvisited coast of Siberia west of the Okhotsk Sea. Lieut. E. P. Bertholf, R. C. S., one of the officers of the revenue cutter *Bear*, was at his request directed to report to the Secretary of the Interior for this service. With the necessary credentials from the State Department to the Russian authorities, Lieutenant Bertholf proceeded to St. Petersburg in order to obtain official sanction of his enterprise. Provided with ample commendations from the Imperial ministry of the interior to the governors-general of Irkutsk and of the Amur region, he left St. Petersburg and proceeded to Moscow. From this city his route lay across European and Asiatic Russia, via the Siberian Railway, to Irkutsk, on Lake Baikal. From Irkutsk he traveled rapidly over the post

roads to Orla, on the shore of Okhotsk Sea, where he purchased a herd of large reindeer, 425 of which he subsequently placed on board a steamer chartered to convey them to Alaska. Owing to a succession of severe gales a number of the deer died en route. On August 28 he arrived at Teller Station, Port Clarence, Alaska, with 254 of these larger animals, which will greatly improve the stock now in Alaska.

AGRICULTURAL AND MECHANICAL COLLEGES.—By an act of Congress approved August 30, 1890 (26 Stat. L., 417), an annual appropriation of $15,000 for the year ending June 30, 1890, and $1,000 additional for each subsequent year until said annual appropriation amounts to $25,000, was made "for the more complete endowment and maintenance of colleges for the benefit of agriculture and the mechanic arts," established in accordance with the provisions of an act of Congress approved July 2, 1862. Said act requires annual reports to be made to the Secretary of the Interior by the treasurers and presidents of the institutions receiving the benefits thereof and imposes upon the Department the duty of ascertaining whether the respective States and Territories are entitled to receive the annual installments of the fund.

During the year the reports from the treasurers of the colleges giving instruction in agriculture and the mechanic arts were carefully examined and the disbursements accounted for therein were found to have been in strict conformity with the law.

Detailed reports from the presidents of the several agricultural and mechanical colleges show a decided increase in instructors, students, property, income, etc., as well as the inauguration of new lines of work. A considerable number have established other courses ranging from four weeks to two years in agricultural and mechanical arts, dairying, domestic science, etc., for the benefit of persons who are not able to take the regular course, and these are well attended. Considerable attention is paid to farmers' institute work, thirty-five of the colleges having participated therein during the past year, thereby aiding in the instruction of many practical farmers.

A notable step has been taken by the Mississippi Agricultural and Mechanical College, the Clemson College of South Carolina, and the North Carolina College of Agriculture and the Mechanic Arts, in the establishment of courses of instruction in textile industry, with special reference to he manufacture of cotton fabrics. Special buildings of cotton-mill design have been erected and equipped for the practical instruction of students.

The statistics for the year ended June 30, 1900 (the latest available), of these institutions show that 25,654 students were enrolled in the agricultural and mechanical departments. Of this number 6,913 were enrolled as preparatory students, leaving 18,741 students in the regular college departments. Of the latter number 5,035 students were

pursuing courses of study in agriculture, 8,341 in the various branches of engineering, 292 in architecture, 1,868 in household economy, 1,167 in veterinary science, 1,215 in dairying, and 823 in other courses of study. The number of students receiving instruction in military drill was 12,800. The Government contributed toward the education of the 25,654 students during the year ended June 30, 1900, at the rate of $46.78 per student. The total income of the institutions for the year was reported as $7,111,749. Of this amount $644,177 was the income received from the land-grant act of July 2, 1862; $1,200,000 was appropriated by the act of Congress of August 30, 1890; the several States and Territories provided $2,916,837, and $2,350,735 was derived from fees, investments, and miscellaneous sources.

The total appropriations to the several States and Territories under the act of August 30, 1890, from the passage of the act up to and including the fiscal year ending June 30, 1902, amount to $12,802,000.

PORTO RICO AND THE PHILIPPINE ISLANDS.—The officers in charge of education in Porto Rico and the Philippine Islands in their reports lay great stress on the schools which they have inaugurated as a means of preparation for local self-government in harmony with our national political ideal.

In view of this national policy, the Commissioner regards it important that provision should be made for the establishment of schools in all places under the United States. He recommends that the Education Office be authorized to provide for schools for Samoa and for Guam, and that an appropriation, to be expended under the direction of the Secretary of the Interior, of $5,000 for each island be made by Congress for the inauguration of the work therein. I commend his recommendation in this matter to your favorable consideration.

PUBLIC DOCUMENTS.

The report of the chief of the document division of the Department, submitted in compliance with the provisions of section 92 of the act approved January 12, 1895, shows that during the last fiscal year publications of the Government were received and distributed by the several offices and bureaus of the Department as follows:

	Received.	Distributed.
Office of the Secretary	103,793	141,164
Patent Office	420,610	390,471
General Land Office	193,750	173,831
Pension Office	3,128	7,248
Office of Indian Affairs	8,754	6,181
Office of Commissioner of Railroads	1,000	921
Bureau of Education	62,078	70,289
Geological Survey	709,118	509,160
Total	1,502,231	1,299,265

Three hundred and seventy-six copies each of volumes 177, 178, 179, and 180, United States Reports, were received from the reporter of the Supreme Court and distributed to judicial and executive officers of the Government, in compliance with the provisions of sections 681 and 583 of the Revised Statutes and of act of February 12, 1897.

The attention of Congress has been repeatedly called to the fact that the number of copies of these reports available for distribution under existing laws was inadequate to supply the United States judges and courts entitled to receive them. Pending action in the premises, additional judges and courts have been authorized by Congress, especially in our new possessions, and if these are to be supplied as their associates have been, which seems but just and proper, it is necessary that Congress at once make provision for this purpose. It is earnestly recommended that this be done at the earliest practicable day.

The General Land Office map of the United States for 1899, on which work was delayed through various causes, was issued during the year. The boundaries of the several territories acquired by the Government through treaties or otherwise, as determined by the latest investigations, are distinctly shown upon this map, as are also, along its lower border, the several islands that have recently come into its possession. Thirty-four thousand five hundred and twenty-five copies of this map have been received from the contractors for the work and distributed as follows: 10,064 to the Senate, 20,190 to the House of Representatives, 985 to the Commissioner of the General Land Office, and the remainder have been disposed of by the Department. Another edition of this map for 1900 is in the hands of the contractors, and there is every reason to believe that the completed copies will be in the hands of the Department for distribution early in 1902.

If a judicious and systematic distribution of this valuable publication could be secured, every high school and all the larger public schools of the country could soon be furnished with at least one copy. Under present methods, however, distributed as it is by three or four separate agencies, duplication and triplication can not be avoided, and thus many parties remain unsupplied who might otherwise secure the work. In fact, this evil, involving waste in many directions and needless expenditure of public money, attends the distribution of nearly all public documents. The only adequate remedy for this evil is the concentration of the distribution of all publications of the Government in a single office. Such provision alone will make it possible for this important part of the public business to be administered upon sound business principles. Its adoption might readily result in the saving of many thousands of dollars annually to the Government.

The suggestions made relative to this matter in his report by the

chief of the document division are recommended to the consideration of Congress.

The sum of $3,690.99 was received from the sale of documents during the year by the Office of the Secretary, of which $1,460 were the proceeds of the sale of United States maps, and $7,341.04 was received by the United States Geological Survey.

OFFICE OF RAILROAD AFFAIRS.

The operations for the last fiscal year and the present condition of the several railroad companies which have received subsidies in bonds and lands from the United States, and which come under the provisions of the act of June 19, 1878 (20 Stat., 169), are set forth in the report of the Commissioner of Railroads.

The Commissioner shows that the marvelous and steady increase of railroad traffic over the land-grant and bond-aided roads, as shown in his reports, is a striking evidence of the prosperity of the people, and especially of the growth of the West.

The physical conditions of the roads in question have improved in fully equal ratio with their great financial increase. Substantial improvements have been made in the main lines, such as the replacement of iron rails by steel, of wooden bridges by steel and iron ones, and of inferior ballast by better sorts.

Attention is invited to statements showing the increase in net earnings of these roads, as also the increase in their gross earnings and expenses, during the last fiscal year. It will be observed that the increase in net earnings amounts to over $13,000,000 and the increase in gross earnings to $37,000,000. The increase in expenses is over $24,000,000. This large increase in expenses is explained by betterments and additions to rolling stock and roadbed, which have been almost universal among the above-mentioned companies, and to increase in the mileage.

Under the head of "Bond-aided roads" the Commissioner sets forth the present state of the indebtedness of these companies to the Government and just what has been done in the process of settlement. The pecuniary interest of the Government in the Union Pacific terminated on November 1, 1897, when the company's debt was settled in full.

Under the head of Central Pacific the Commissioner gives the present status of the company in regard to its debt to the United States, namely, $58,812,715.48. Under an agreement with the United States which was given in full in the last report of the Commissioner, this company has bound itself to the payment of 20 promissory notes, payable on or before the expiration of each successive six months for ten years, each note being for one-twentieth of the sum of its entire indebtedness, and bearing interest at the rate of 3 per cent per annum,

payable semi-annually. A condition is attached to the effect that if default be made in any payment of either principal or interest of any of said notes, or any part thereof, all of said notes then outstanding, principal and interest, shall immediately become due and payable, notwithstanding any other stipulations of the agreement of settlement. This settlement was made as of the 1st day of February, 1899.

Regarding the Sioux City and Pacific the Commissioner quotes the act passed on June 6, 1900, relative to the indebtedness of this company to the Government, whereby the Secretary of the Treasury, the Secretary of the Interior, and the Attorney-General of the United States were authorized and empowered to make a settlement of said indebtedness. In pursuance of said legislation the claim of the United States against this road was offered for sale on June 20, 1901, of which full public notice had previously been given. On said date the claim of the United States was bought by the Chicago and Northwestern Railway Company for $1,872,000 in cash and $250,841.24, earned by the Sioux City and Pacific Railroad Company by transportation services performed for the Government, but surrendered by the company to be applied to its indebtedness. Under the terms of sale it was agreed that the United States should retain any further amount earned by the road for transportation performed for the Government to the date of sale. The agreement is given in full in the Commissioner's report.

The Central Branch Railway Company is the successor of the Central Branch Union Pacific Railroad Company, having been incorporated July 6, 1899. This road was sold under foreclosure proceedings, brought by the trustees under the first mortgage, for $2,350,000. This amount covered only the principal of the first-mortgage bonds, so that the United States, holder of the second mortgage, received nothing by way of reimbursement for its claim against the company, amounting to $3,750,125.13.

In regard to this sale the Attorney-General held that—

> While the United States is named as a defendant in the bill of complaint to foreclose the mortgage on the Central Branch Union Pacific Railroad, no subpœna, citation, or other process was served upon it, nor did it appear as a party, and is therefore not barred by said decree of sale and might still redeem the property or cause its resale on account of its subsidy lien.

He holds that one-half of the compensation due from time to time for the services rendered by this company to the Government should be withheld and applied upon the bonds issued by the United States in aid of its construction, notwithstanding the foreclosure and sale of the same.

As all these companies are indebted to the Government for the grants of land made to them, they still come within the jurisdiction of the Railroad Bureau, according to the provisions of the act of June 19,

1878, mentioned above, and are required by said law to report annually and monthly to the Commissioner of Railroads, notwithstanding any settlement which may have been made of their financial indebtedness.

THE TERRITORIES.

ALASKA.

The governor of Alaska, John G. Brady, submits an extended report concerning the progress and development of the district of Alaska during the year, embodying a historical statement as to the administration of the affairs in the district from the time of the formal transfer of the lands embraced therein from Russia to this country to the present time, together with the various laws enacted by Congress in relation thereto.

The total population of Alaska, according to the census of 1900, is 63,592, of whom 25,536 are natives. The increase in the population during the last census period was 31,540, or 98.4 per cent. The area of Alaska is approximately 590,884 square miles, or about one-sixth of the whole territory of the United States; it embraces numerous lofty mountain chains and valleys, extensive plains, and contains forests of valuable timber. The average number of persons to each 100 square miles is approximately 11. There are four cities of more than 1,000 inhabitants, to wit: Nome, 12,486; Skagway, 3,117; Juneau, 1,864, and Sitka, 1,396.

The permanent settlement of Alaska, the governor states, is dependent upon the enactment of liberal laws by Congress which will enable persons so desiring to acquire title to the public lands. The laws of the United States relating to mining claims have been in force since 1884, and, as a consequence, the extension of the mining industry has been unobstructed and therefore phenomenal in character. The acquiring of title to lands other than of a mineral character is, under the present circumstances, a very difficult matter. A step, however, in the right direction was taken by the passage of an act entitled "An act extending the homestead laws and providing for a right of way for railroads in the district of Alaska," approved May 14, 1898 (30 Stat., 409). No entries, however, have been made under this law, for the reason that homestead entries can be made only on surveyed lands, and as yet no public surveys have been made in Alaska for homestead purposes.

From the appropriation of $325,000 for public surveys the sum of $5,000 was set aside to commence surveys in the district under the direction of the Commissioner of the General Land Office. Bids were invited for the commencement of this work, but owing to the high rates of transportation between the settlements of Alaska, the price

of labor, and the length of time required before payment for their services could be received, the deputy surveyors stated that they could not undertake the work, even at the maximum rate fixed by Congress. To remedy this condition of affairs the governor recommends the repeal of section 1 of the act of May 14, 1898, and urges that the general land laws of the United States be extended to Alaska, so that settlers coming into the country may find laws similar to those enacted for other parts of the Union. He also recommends an appropriation of $200,000 for public surveys in Alaska, to be expended within the discretion and under the direction of the Secretary of the Interior.

The inauguration of a Territorial form of government in Alaska the governor does not advocate at this time. To do so it would be necessary to provide funds for the running thereof by local taxation, and those who have made a permanent home in the district are too few in number, he states, to bear the burden of such a tax levy. The extension of the general land laws, however, would doubtless attract permanent settlers in large numbers and the formation of a Territorial form of government might follow in due course. The varied and important interests of the district seem to require representation in Congress, and to that end he strongly urges that provision be made for a Delegate from Alaska.

Attention is called to the agricultural possibilities of Alaska. Market gardens are now found near Skagway, Dawson, Eagle, and at other points in central and southern Alaska and along the banks of the great rivers there are vast tracts of arable land. Hay can be cured in the valleys to the north of the Coast Range, but along the southern coast the frequent rains usually render the drying of hay a difficult matter. In this region the silo is used with success. The few agricultural experiment stations in Alaska have demonstrated their usefulness. For the extension of their work the governor recommends that the amount appropriated for their support be increased to $30,000.

In the opinion of the governor the Alaskan fur trade is doomed to extinction. The sea otter and the fur seal are fast disappearing. The beaver has been driven to the remote districts. The arctic fox, the bear, and the mink seem to be the only fur-bearing animals which are still found in considerable numbers in Alaska. The enacting of a stringent game law by Congress, in order to afford better protection to the moose, caribou, deer, and other large game, is advocated.

The salmon industry is flourishing and the number of canneries rapidly increasing. The pack for the year 1900 was 1,529,569 cases of 4 dozen 1-pound tins to the case, having a market value of more than $6,000,000; nearly 30,000 barrels were salted. The future success of this industry, it is stated, demands, owing to the enormous quantity of this very valuable food fish being taken, the establishment and operation of salmon hatcheries under the control of the General Gov-

ernment. Large quantities of halibut are taken in southeast Alaska and shipped to ports on Puget Sound, and thence to various parts of the United States in refrigerator cars. Herring, oolachin, and a great variety of other fish, as well as crabs, clams, and cockles, are abundant. As a resource for future development, attention is called to the vast cod banks, aggregating many thousands of square miles of fishing grounds along the shores of Alaska hitherto untouched.

Three hundred thousand dollars has been appropriated by Congress for the construction of light-houses and fog-signal stations in the Alaskan waters. Contracts have been let for the erection of one light-house on the middle island of the Five Fingers in the Stephens Passage, and another on Sentinel Island in Lynn Canal. When these are completed it will render traveling along the rocky shores of the district less dangerous. It would be good public policy to create a light-house district for Alaska, provided with an inspector, suitable tender, and other necessary appliances.

The mining industry has been vigorously prosecuted during the year. The development of the gold fields in the region of Nome has been greatly hampered by litigation. The output from this district for the present season is estimated at $7,000,000. The mines at the headwaters of the Koyukuk have attracted much attention. The Porcupine and Tanana districts have also been very productive. The operations of the three mining companies on Douglas Island, in southeastern Alaska, have been greatly extended. They now operate 800 stamps. These companies make handsome profits and distribute large sums in wages. The Berners Bay, Snettisham, Rodman Bay, Ketchikan, Windham Bay, Sundum, and Bald Eagle are other well-established quartz mines in southeastern Alaska. The shipments from the mines on Unga Island, in western Alaska, are estimated at $20,000 per month. Silver and platinum have been found in paying quantities, and there have been allegations of discoveries of tin and cinnabar. Mountains of iron are available, but very little attention is paid to iron on account of the search for gold. Copper mines have been opened upon the shores of Prince William Sound, Prince of Wales Island, and Dall Island.

The governor expresses the opinion that the mining interests in Alaska have become so extensive and valuable as to render advisable the appointment of a commissioner of mines, whose duty would be to exercise general supervision over the mining operations in the district, to protect mining companies against unjust litigation for damages, and to require the companies to conform to regulations prescribed for the protection of miners.

Under the act "making further provision for a civil government for Alaska," approved June 6, 1900 (31 Stat., 321), the incorporated towns of Juneau, Skagway, Ketchikan, and Treadwell have assumed the man-

agement of the public schools within their limits. The appropriation for education in Alaska, which had been made annually since 1886, was discontinued by Congress at its last session. In lieu thereof Congress, upon the recommendation of the Secretary of the Interior, passed an act providing, among other things, for the setting aside for the support of the schools outside incorporated towns in Alaska 50 per cent of all license moneys paid for business carried on outside incorporated towns in said district. Schools are needed in many settlements; these can not be provided until an amount of money sufficient for the purpose has been collected and deposited in the treasury. The clerks of the three district courts are charged with the duty of collecting this license money. One division has reported that of the moneys so collected there is $11,698.46, available for educational purposes, but no reports have been received from the clerks of the other two divisions. In discussing this matter the governor states:

> The person or persons, corporation, or company prosecuting or attempting to prosecute any of the lines of business which are enumerated within this district shall first apply for and obtain license so to do from a district court or a subdivision thereof in said district, and pay for said license the amount for each respective line. This work falls upon the clerks of the courts. He issues the liquor licenses upon the order of the court and receives the money, and is under heavy bonds to the Government. This is a heavy load upon the clerk which is really not in harmony with the duties of his office. Each division of Alaska is a very large territory, and there are some who make no attempt to comply with the law. The clerk has not the time nor the machinery for this business. The collecting of revenue and special taxes belong to the Treasury Department, and this whole business of collecting these licenses and bringing to punishment those who refuse to comply with the law should be transferred to the Commissioner of Internal Revenue. The special taxes are now collected by the officers of this Bureau, and they have the reputation of not missing many who should pay. It is recommended, therefore, that the clerks be relieved of this onerous duty to them, and that it be turned over to the proper officers of the Treasury Department.

The timber of Alaska is an important item of its wealth; the forests are almost tropical in their luxuriance and impenetrableness. The whole under surface of the land is covered with a heavy growth of moss, which holds water like a sponge; large spruce and hemlock grow upon the rocky mountain sides with apparently no soil whatever, and the young timber takes hold and grows very rapidly. Climatic conditions are such that in southeastern Alaska there is but little danger from forest fires. The governor states that there should be applied to this great timber reserve the preservative methods of modern forestry. There have been wanton depredations by people from along the Portland Canal, but the General Land Office has taken this matter in hand and will doubtless be able to stop any further stealing of timber in that direction.

During the autumn and winter of 1900, pneumonia and measles prevailed among the natives on the Aleutian Islands and the shores of

Bering Sea, and it is estimated that fully 2,000 perished. Hitherto the natives have been self-supporting, but of late their domain has been entered by gold seekers and the Eskimo has to face new conditions. He now has many competitors in the pursuit of walrus, whale, and seal, and has a most difficult time in eking out an existence. With a view to preserving the self-supporting condition of the aborigines of Alaska, the governor recommends that a special commission be appointed to make a thorough investigation into the condition of the natives of Alaska for the information of Congress that the latter may apply the proper remedy.

The condition of the native tribes in southeastern Alaska is much more satisfactory. Many of them are employed in the fisheries, mines, sawmills, and logging camps, and some of them successfully conduct business enterprises of their own.

In order to aid the natives of southern Alaska to withstand the diseases which periodically visit them, the governor recommends the appropriation by Congress of a sum sufficient for the establishment and maintenance of a hospital in southeastern Alaska, to be under the care and control of the Marine-Hospital Service.

No declaration has yet been made by Congress regarding the legal status of the natives of Alaska. A bill which was introduced by the chairman of the Committee on Territories at the last session of Congress makes provision for the acquiring of citizenship by the natives of Alaska; a bill with similar provisions should become a law as soon as possible.

Military telegraph lines are now in operation in Alaska between St. Michael and Nulato, Eagle and Dawson; lines are being constructed between Eagle and Valdez, Nulato and Fort Gibbon, and cables have been laid between St. Michael and Nome, Juneau and Skagway. A cable along the shore from southeastern Alaska to Unalaska, on the Aleutian Islands, would be of great importance commercially, and, on account of the commanding position of Unalaska, would be of importance from a strategic point of view. Attention is called to the necessity for communication by cable with the States and the Philippines. Cable communication with the latter should be by way of the above route, as the shortest and commercially the most advantageous one.

The United States Coast and Geodetic Survey completed the construction during the year of two magnetic observatory buildings at Sitka. The purpose of the observatories is to furnish a base or reference station for all magnetic work done in Alaska and to carry on a series of uninterrupted observations by automatic photographic methods, in connection with similar observations of other observatories established elsewhere and observations undertaken by exploring parties in the polar regions.

Many criminals are reported as coming to Alaska. The governor states that the more strictly the laws are enforced in the cities on the lower coast the more surely will the criminal element migrate this way. Those who are now convicted of heinous crimes and sentenced to a term of over one year are transported to McNeil Island, Washington. That prison now contains a pretty large contingent from Alaska. The time has arrived when a penitentiary should be built here, for instead of having fewer criminals we are bound to have a large increase annually and some of them most desperate, such as the man who murdered the three prospectors on Unimak Island last June.

The governor suggests that if an island was selected in Sitka Harbor for a penitentiary, nearly all the labor in its construction might be performed by prisoners who are now held in idleness in the Sitka jail.

On the 16th of January, 1901, with the approval of the Department, a contract was entered into with the board of trustees of the Oregon State Insane Asylum for the care and custody of persons legally adjudged insane in the district of Alaska for the period of one year.

Up to the present time 9 persons have been adjudged insane and have been committed to the above institution; one of these died August 22; another was discharged as cured on July 25.

A notable change, it is stated, has occurred during the past year in public opinion regarding the wisdom of stocking Arctic Alaska with reindeer, and the people are beginning to appreciate the true value of these animals as a factor in developing the resources of northern Alaska. Two hundred deer of much larger and stronger breed than that in use in this country were imported from Russia during the summer and delivered at the Teller reindeer station at Port Clarence. There are now 4,112 reindeer in 9 herds in the district of Alaska.

Section 32 of the act approved June 6, 1900, providing a civil code for Alaska, provides that the fees received for certificates issued to members of the bar and for commissions to notaries public shall be set aside to be disbursed on the order of the governor in maintaining the District Historical Library and Museum. From this source there was received during the year $2,427, of which $369.22 has been expended. The library already contains about 4,000 volumes, among them being several important works regarding early explorations in Alaska.

In recapitulating the legislative needs of the District, the governor states that the people want the land laws in their fullness, the lands surveyed for immediate settlement, and a Delegate in Congress. If these wants are attended to they desire to be worthily represented at the Louisiana Purchase Exhibition in 1903. This can be done, he suggests, by Congress appropriating the money which Alaska has already paid into the United States Treasury.

Arizona.

The annual report of Governor N. O. Murphy states that the Territory has been very prosperous during the year. Bountiful rains have made agriculture, horticulture, and grazing especially profitable, and mining, manufacturing, and every material industry have progressed in a remarkable degree. The wealth of the Territory is increasing rapidly. The assessed valuation of property has increased nearly $6,000,000 during the year, and the governor urges that the evidence submitted in detail "should be convincing as to the qualifications of Arizona for self-government."

The population of the Territory is estimated at fully 135,000. Commenting on the figures of the national census for 1900, it is stated that a number of localities have expressed dissatisfaction with the returns, the greatest injustice having been done to Phoenix, the capital, in fixing its population at only 5,544. It is explained that the discrepancy between the census figures and the actual population was undoubtedly due to a great extent to the fact that the enumeration was made in the summer, when a large proportion of the population was at the seashore and other summer resorts, and some of the shortage was doubtless attributable to the careless work of enumerators. For the city election in May, 1901, the registration in Phoenix was 2,317, indicating a population this year of at least 10,000. For a number of years the annual census has shown an annual increase of about 10 per cent in the number of school children. Of the white population of 92,903, returned for 1900, in which there were stated to be 22,395 citizens of foreign birth, it is explained that the assumption generally held in the East that this foreign-born population is mostly Mexican is an error. All the important mining districts contain a large number of Irish and Cornish miners, and there is a respectable representation from Sweden, Germany, and Italy. It is doubted whether Mexicans comprise one-half of the so-called foreign population.

The quality of Arizona citizenship is said to be of the highest character; the population is typically American, and the percentage of illiteracy is thought to be smaller than in any State of the Union. The public-school system is liberal and comprehensive, and education is free throughout all the grades to and including the university.

There are 23,503 children of school age in the Territory, an increase of 2,670 since 1900. There are 270 school districts, an increase of 23 for the year. Within the last twelve months new schoolhouses to the number of 18 have been constructed. There are 430 teachers employed, an increase of 41 for the year. Of the total number of teachers 315 are women. The average salary for male teachers is $80.61 per month; for female teachers, $64.80. The total value of school buildings and furniture is $553,181. The total bonded debt for school

purposes is $257,787. The Territorial university is well attended and has an excellent faculty. There are two flourishing normal schools for the training of teachers; the requirements for graduation are rigid.

The net bonded and floating indebtedness of the Territory is $1,075,951.77, a nominal increase of $5,101.07 for the year. Had it not been for extraordinary expenses, covering the cost of completing and furnishing the capitol building, and on account of the last legislature, the governor states there would have been a material decrease in the Territorial debt.

The assessed valuation of the taxable property as finally fixed by the Territorial board of equalization is $38,853,831.37. The governor explains that a vast amount of personal property escapes taxation altogether, owing to faulty methods of assessment; that by reason of the custom of assessing at a nominal valuation producing mines which are worth many millions of dollars, as well as on account of the uniformly low valuations placed upon many classes of property by the county assessors, the total assessed valuation falls far short of the actual value of the property which is subject to taxation. Instances are cited where single mines are worth as much as the assessed value of all the property in the Territory. The improved and unimproved land returned for taxation has an aggregate acreage of 999,731. This is exclusive of 2,917,567 acres of land grants and railroad lands. Railroads aggregating 1,052 miles are taxed at valuations ranging from $888.33 per mile to $7,036.92 per mile, the low valuations being placed upon mining and logging railroads and upon land-grant lines which by agreement pay taxes on a fixed valuation, but which by Congressional enactment are exempt from taxation. There are 506 miles of railroad exempt from taxation under special Territorial enactments for a term of years.

Railroad construction during the year has been active. A number of branch lines have been built, including the completion of a line to the Grand Canyon of the Colorado. The governor states that within the next twelve months a number of new and important lines will be under construction.

The banks of the Territory are in a prosperous condition. On the 30th day of last June the deposits in national and Territorial banks aggregated $6,225,480, a gain of $1,432,175.16 for the year. The loans and discounts amounted to $3,631,060. The capital and surplus and undivided profits of the 7 national banks amounted to $645,952; of the 16 Territorial banks, $622,486. There are 6 building and loan associations, with aggregate resources of $588,369.45, a gain of $91,350.51.

Of the more than 72,000,000 acres of land in Arizona but 5,723,757 acres have been appropriated. Only 1,935,327 acres are included in farms, and of this but 254,521 acres are improved.

The importance of irrigation is demonstrated by the fact that irrigated lands outside of Indian reservations aggregate an acreage of 185,396. During the last ten years 545 miles of canals and ditches were constructed, at a cost of $1,508,469. Of the 5,809 farms in the Territory, 4,210 are irrigated and 1,599 unirrigated. The average value of irrigated land (according to the census figures) is placed at $43.50 per acre, while that for the best irrigated land, suitable for growing alfalfa, is from $60 to $200 per acre. Irrigated fruit land is even more valuable.

Upon the subject of the further development of the agricultural resources of the Territory the governor says:

The problem of water storage for irrigation is the most interesting question before the people of Arizona. All are agreed that upon the storage of the flood waters depends the future development of agriculture in the Territory. While there are millions of acres of Government land open to entry, there is hardly an additional acre that is available until the water supply is increased through storage. The executive office is in constant receipt of inquiries from all parts of the Union as to the opportunities in Arizona for settlers on the public lands. To such inquiries the reply is always made that, practically speaking, all of the land for which there is water available at present has been acquired by settlers, and the only opening for other agriculturists is to buy land already titled. That there are still many inviting opportunities for men of energy and moderate capital is true, for much of the land within reach of water from the canals is held in large bodies and would yield much greater returns if subjected to that thorough cultivation which always attends small holdings in an irrigated country.

The storage problem is twofold: First, it involves increasing the water supply for such canal systems as now carry a deficient volume in the dry season; and, second, a supply sufficiently large and constant to warrant the reclamation of large areas of the so-called desert, or public domain.

That phase of the question which concerns the lands already acquired from the Government is, of course, of more pressing interest to those who hold property in the Territory than is the broad question of the reclamation of the public lands. As explained in my former reports, the returns from agriculture under irrigation have been so remunerative, even under the most adverse conditions of inadequate water, that capital has been led into the construction of canals for which the water normally is not sufficient, and under these canals settlers have acquired lands from the Government and have gone ahead cultivating and improving their possessions so far as possible, although in many instances the land lies uncultivated year after year simply because there is not water for it.

The best illustration of the conditions here referred to is seen in Maricopa County, the principal agricultural county of the Territory. The area of land which has been settled upon under the various canals in Maricopa County will easily aggregate 300,000 acres, while the land actually irrigated each year will not probably amount to more than 130,000 acres, and for much of this area there is, throughout a long season each year, an insufficient volume of water in the ditches. Contending with this uninviting condition, the agriculturists of the county have made a showing which is really phenomenal. Within the county, including Phoenix, there is property of an assessed valuation of approximately $10,000,000, with an actual valuation much greater than that, and it can be said that nearly all of this wealth has been produced by irrigation. Not only that, but there is probably no other community in the world so uniformly prosperous. Farmers by the score take their families to

the seashore and other pleasure resorts in the vacation season, and the agricultural population generally lives more comfortably and enjoys more luxuries than any other farming people in the United States.

Recognition of these facts, and of the further fact that annually enough water flows to waste in the floods of the Salt River to fully irrigate all of the 300,000 acres under the canals if it were stored, and the knowledge that storage would make the Salt River Valley one of the wealthiest regions in the world, have caused the people of the valley to turn with earnest attention during the past two years to consideration of the storage problem. As explained in the matter dealing with the progress of irrigation in the several counties, Maricopa County is fortunately situated in having near a reservoir site in the Tonto Basin, which offers a ready solution of the question. There is no division of sentiment as to the necessity of constructing the reservoir. The only doubt is as to the best method of accomplishing success. A private corporation having acquired from the Government the necessary rights to the site, has expended a large sum of money in settling the engineering questions involved, and in the effort to safely finance the project.

The difficulties, however, in the way of obtaining the large capital necessary to the construction of a permanently stable dam have been very great. In the first place, any effort to obtain considerable capital in the money centers of the East for industrial enterprises in Arizona encounters an ignorance of the conditions prevailing in the Territory which makes the task a heavy one. It is all the more difficult to enlist capital for water-storage enterprises on account of the mass of questionable data with which the investing public has been supplied. For instance, the leaders in the propaganda of "Government ownership" of all irrigation enterprises of the future have in mistaken zeal industriously circulated statements to the effect that no storage enterprise by individuals or private corporations can be made to yield a profit on the investment. These statements have been based, as I have explained in former reports, on isolated examples in California, which find no parallel whatever in Arizona. The few reservoir projects in California and elsewhere which failed primarily to yield satisfactory returns to stockholders were failures simply because they were carried out without due consideration of the circumstances surrounding them. Due attention had not been given to the water supply, and the fact that an irrigation system for lands vacant at the beginning of construction must necessarily wait a term of years for revenue to flow in from the lands to be irrigated, especially if the lands are given over to slow-maturing fruit orchards. Apparently no appreciation of a different situation in Arizona can be brought home to those who have so willingly accepted the dictum that all further progress in the irrigated regions of the West must await appropriations from the Federal Treasury. Anybody at all familiar with existing conditions in the Salt River Valley knows that if a reservoir were assured, every acre available for cultivation under the reservoir would be in tillage and yielding a revenue the first year in which water was supplied.

It is evident that for the Salt River Valley there is not much encouragement in the movement for construction of reservoirs by the Government, for the reason that it is feared Congress would not be easily persuaded to appropriate money for the benefit of lands already settled, inasmuch as the headway so far made for reservoir construction for the public lands has not reached the point of assured success. But two solutions accordingly appear to offer. The capital required must be provided by a private corporation, alone or assisted by some form of local encouragement, or the construction must be done by the county or a district thereof. Earnest consideration of these points is now engaging the attention of the people of the valley.

There is of course deep interest in the general question of "Government aid" to the people of the West in the matter of storage enterprises. It is insisted by many, and not without reason, it must be confessed, that the Government very properly could extend financial assistance in the reclamation of the arid lands, for the reason

that the expenditure would be for the direct benefit of intending settlers and the outlay ultimately would be returned to the public Treasury.

If Congress could be brought to a favorable consideration of the proposed system, Arizona offers exceptional reasons for beginning the work here. As heretofore explained, and as forcibly pointed out by the Secretary of the Interior, the construction of the proposed dam at San Carlos on the Gila River would settle permanently the question of a water supply for the Indians on the Gila River Reservation, of whom there are more than 4,000 engaged in an attempt to make a living by farming. Unless a system of irrigation is provided for them by the Government they must inevitably become a burdensome charge upon the National Treasury, whereas their capabilities in the way of self-support are altogether satisfactory. Not only would the San Carlos reservoir provide these Indians with a permanent water supply, but many thousands of acres of vacant land would be available for homeseekers. The revenues from the districts thus irrigated, even though based on a very moderate charge for the water service annually, would be sufficiently large to more than pay a good interest on the money necessary to be invested in construction. Complete information as to the cost of the proposed reservoir is within reach of Congress, and it is to be hoped that the coming session will authorize the beginning of the work. No better opportunity could be offered for a trial of the plan of Government construction of reservoirs.

On the general question as to the best method of quickly bringing about the settlement and improvement of the arid lands, I have in no wise receded from the position heretofore taken, namely, that the most practicable course would be through a general cession of the arid lands to the States and Territories in which they lie. Unless it be assumed at the outset that the people are incapable of self-government, there can be no argument whatever against permitting them to take over the public domain and use it as a basis for obtaining capital for the construction of reservoirs. The entire opposition to the suggestion lies in the assumption that the people are essentially corrupt and that the lawmakers whom they would direct to represent them would be perversely dishonest; in the assumption that it would be impossible for Congress to devise a measure which would properly protect the people from spoliation, and finally in the assumption that capital is always dishonest and should have no consideration or encouragement. Happily such inferential arguments are confined to but a few, and have little popularity in Arizona.

The governor states that never in the history of the Territory have the prospects been brighter for the stock raisers of Arizona. Heavy rains have been general, resulting in an abundance of feed on the open ranges, and many sections of the country not generally considered as available cattle range now afford the finest grazing imaginable. Prices during the past year have been good and have yielded handsome profits, while a brisk demand has continuously obtained. Shipments from the Territory have been heavy and have taxed the range men to the utmost to supply the demand. This condition has resulted in an appreciable reduction in the assessed valuations, but has stimulated the importation of fine cattle for stock purposes, thousands of thoroughbreds having been taken into the Territory. The number of cattle returned for taxation was 281,541; of sheep, 377,936. The general health conditions of all classes of live stock are stated to be better than in any other section of the United States. The climate is exceptionally healthful, and a wise system of sanitary laws is strictly enforced under competent supervision.

An increased activity in mining is noted. In every mineral-bearing section of Arizona new mines are being opened and profitably worked. Deep mining is a new and satisfactory feature. Contrary to opinions formerly held, it has been shown that Arizona mines increase in value with depth. In one of the gold mines the main shaft is down 3,200 feet, with values better than ever. Similar experience is the rule with numerous mines. The production of copper is well sustained, and it is claimed for Arizona that it is the most attractive copper region in the world. The total production of electrolytic copper in the Territory in 1900 was 466,992,663 pounds. The output for this year is estimated at fully as much. The value of the copper product for 1900 is elsewhere estimated at $17,286,517.

Manufacturing in the Territory is confined mainly to industries closely connected with mining. In miscellaneous manufactures, aside from those related to the production of metals, 1,648 wage-earners are employed.

The number of Indians is fixed at 26,480, a decrease of 1,989 since the census of 1890. All the Indians have been peaceable, and in all the tribes a satisfactory progress in civilization is noted. The Indian school at Phoenix, which is one of the largest in the United States, is an important factor in improving the general conditions. The governor states that, among other things, the tribes occupying these reservations in the Territory are not—

pastoral in their customs. Otherwise these reservations would maintain several hundred thousand cattle and sheep, which, if properly managed, would make the Indians practically self-supporting. I believe that a further maintenance of the tribal relations as now conducted and the retention of reservation agencies, around which the Indians cluster and live in idleness upon rations issued by the Government, most seriously retard the civilization of the Indian. The great expense of maintaining the present system can also, in my judgment, be greatly reduced. If, in making farmers of the Indians after lands have been allotted, it is found beneficial to aid them with farm implements and seed and reduced rations for a time until they are fairly started, it should be done, and I consider it entirely wise and proper for the Government to build reservoirs for the storage of water for irrigation in suitable localities, with canals leading to the allotted lands, and for this purpose Indian labor could be very largely utilized.

But the lands that are not agricultural on these reservations—mineral, grazing, and timber—are of no use whatever to the Indians, and if opened to purchase and settlement they would support a very considerable population and go far in enriching the country.

Every session of Congress bills are introduced to segregate a portion of some Indian reservation where valuable mineral has been discovered, so that mining can be engaged in, or for some other purpose, and this kind of legislation has been in most cases vigorously opposed by the friends of the Indians through misapprehension of the facts and from an honest but mistaken idea as to the effect.

I can see no possible benefit in withholding these large areas, capable of producing great wealth and supporting many people, from being developed and contributing to the wealth of the country, especially as they do not benefit the Indian in the slightest degree in their present condition. It is true that the building of the railroad

across the San Carlos Reservation did more to civilize and restrain the Apaches than any previous influence. They have been given more employment, and intermingling with the white people has benefited them.

The labor supply of the Territory is said to be fairly up to the demand, as a rule, although in a number of instances during the year mine operators have found difficulty in obtaining a sufficient number of skilled miners. The mining districts are always tempting to enterprising prospectors, and many miners are in the habit of dividing their time between employment under others and work for themselves. There is no perceptible excess of laborers in any industry, although, it is explained, skilled laborers are always most in demand. It may be said with certainty that no able-bodied man need be idle in Arizona if he is willing to accept hard work. In the lighter employments, such as clerkships in stores and offices, the supply in Arizona, as elsewhere, is always equal to the demand. At Phoenix and other points it is at times in excess of the demand. This is because such a large number of persons go to the Territory in search of health, and are willing to do any work which will yield a living. There have been no labor disturbances of consequence.

The governor, in closing his report, recommends that Arizona be admitted as a State; that all the public lands within the Territory be ceded to the Territory or State; that until the lands are ceded authority be granted to the Territory to lease the grazing lands; that all lands within the Territory be surveyed; that a Government assay office and branch mint be established in Arizona; that an appropriation be had for artesian-water exploration within the Territory, and that such exploration be ordered; that the Government proceed with the construction of the proposed reservoir dam near San Carlos, on the Gila River, and that a commission be appointed for ethnological and archæological research in the Territory, and that a suitable appropriation be made by Congress therefor.

Hawaii.

The annual report of the Territory, submitted by the secretary, Henry E. Cooper, who was acting governor during the period of disability of Governor Sanford B. Dole, which extended from May 11, 1901, to August 30, 1901, gives an extended review of the conditions prevailing during the year, and shows that the islands are in a fairly prosperous condition.

The total population of the islands is stated in the last annual report to have been, approximately, 154,201. Final revision of the census returns, however, shows the total population to be 153,727. There has been a decided increase in the number of American-born residents; in 1872 there were 889; in 1896, 2,266; in 1900, 4,068. The returns indicate a continued decrease in the number of Hawaiians and part

Hawaiians. Several causes are assigned for this diminution. In 1872 there were 49,444 Hawaiians, and in 1900 there were but 29,834.

The annual death rate for the city of Honolulu per thousand for the year 1900 was: Hawaiian, 42.81; Chinese, 16.16; Portuguese, 19.09; Japanese, 28.93; all other nationalities, 13.75.

The present aggregate area of the public lands is approximately 1,772,713 acres, valued at $3,569,800. The public lands of the Territory include all of the class formerly designated as "Crown" lands together with that formerly known as "Government" lands. When Kamehameha III consented to a division of the lands which had been previously held absolutely by the sovereigns of the country, he gave a part to the chiefs and people and a portion for the support of the Government, and the remainder he reserved for his own private use. These reserved lands were designated as "Crown" lands.

Article 95 of the constitution of the Republic of Hawaii declared the "Crown" lands to be the property of the Hawaiian Government. The land act of 1895, passed by the legislature of the Republic, consolidated the Crown lands with the Government lands under the general term of "public lands." These two classes of lands now constitute the public domain of Hawaii. Maps are submitted with the report, showing the size and location of all the principal lands comprising the public domain, accompanied by a statement giving the name of each island, the area and general characteristics, the outstanding leases, if any, annual rental, and date of expiration of leases. A great majority of the principal lands are under lease, many of them for long terms, which do not expire for several years. A synopsis of the land laws of the Territory, which have been continued in force by the organic act, are given, and it is pointed out that owing to local conditions the application of the general land laws of the United States would not be advantageous, and that the present laws are just and adequate for the purpose of opening the lands for settlement. Lists are also given showing the city and town lots under lease, land transactions, and patents issued during the last year.

The commerce of the Territory seems to be on the increase; although shipments to the mainland can no longer be classed as exports, the figures are given, as showing the output of the islands. Complaint is made that since June 14, 1900, the date Hawaii became an organized Territory, it has been difficult to collect statistics of the amount of trade between the mainland and the islands, because no entry of goods has been required when either shipped to or from the mainland; the collector of the port of Honolulu, however, has been able to furnish a statement of the quantity and value of goods shipped, which shows the total for the period to be $28,054,430.43.

From various sources of information, and a comparison with the amount of imports from the United States in previous years, the value

of general merchandise and plantation supplies purchased on the mainland is placed at $20,000,000.

During the year 662 vessels entered the ports of Honolulu and Hilo; statistics are not given for the other ports of entry. The nationality and class of vessels arriving at the port of Honolulu were as follows:

American:	
Steamers	82
National vessels	54
Sailing vessels	331
Total	467
British:	
Steamers	59
National vessels	3
Sailing vessels	21
Total	83
German:	
Steamers	2
National vessel	1
Sailing vessels	7
Total	10
Norwegian:	
Steamers	2
Sailing vessels	5
Total	7
French: Sailing vessels	2
Japanese: Steamers	27
Italian: Sailing vessels	3
Chilean: National vessel	1
Austrian: National vessel	1

At the port of Hilo:

American:	
Steamers	3
National vessel	1
Sailing vessels	54
Total	58
British:	
National vessel	1
Sailing vessel	1
Total	2

Greater harbor facilities, it is stated, are needed at the ports of Honolulu and Hilo, as vessels are often detained far beyond the time specified in their charters.

The principal sources of revenue for government of the islands are from taxes levied upon real and personal property; taxes upon income,

sale of Territorial internal-revenue stamps, license fees, penalties, and costs in civil and criminal actions, inheritance taxes, rates from waterworks and rents from land, and proceeds from land sales. Taxes levied upon real and personal property are limited to 1 per cent upon the assessed value, and the income tax is fixed at 2 per cent upon the net profit or income of all persons residing in the Territory over and above $1,000. A similar tax is levied upon the income of all corporations, without, however, giving the benefit of the $1,000 exemption. The assessed value of all real estate is $58,547,890 and personal property $62,625,038; total, $121,172,928.

Estimated receipts from all sources for the present fiscal year is $2,565,500. The Territorial appropriation for salaries and pay rolls for the biennial period ending June 30, 1903, is $2,149,813.50, and for current expenses $3,523,530.53. This last amount is expended for the general running expenses of the government, repairs to public buildings and public roads, and for the erection and construction of minor public improvements.

During the prevalence of the bubonic plague in the city of Honolulu in the months of December, 1899, and January and February, 1900, the board of health, after many futile efforts to place that portion of the city known as Chinatown in a sanitary condition, became convinced that extraordinary measures would have to be adopted if the disease was to be brought under control, and decided that the only speedy way of solving the problem was to destroy by fire such buildings as could not be satisfactorily renovated and which had been declared to be infected by a plague, and a number of buildings were destroyed by fire. In attempting to burn a block of condemned buildings on January 20 the fire department lost control of the fire, owing to a sudden and violent change of wind, resulting in the destruction of the entire district. To relieve the distress occasioned by this unfortunate event, the executive of the Territory has endeavored to have the losses determined, with the intention of ultimate settlement and payment.

Under the authority of an act passed by the Territorial legislature, a commission was appointed for the reception and determination of these claims. Six thousand and eighty-two claims, aggregating $2,472,451.83, have been filed and are now in process of adjustment. The legislature of the Territory appropriated $1,500,000 for the payment of adjudicated claims, the amount to be distributed over a period of three years at the rate not to exceed $500,000 per annum. Attention is called to the fact that expenses were also incurred in eradicating the plague amounting to $720,488.07. In view of the fact that this heavy financial burden has been placed on the Territory, the suggestion is made that some relief be granted, and that Congress author-

ize the retention of the custom-house receipts by the Territory for the purpose of paying such sums as may be awarded by the commission.

Attention is called to the scarcity of unskilled labor necessary for carrying on work on the plantations. It is asserted that unless some means are devised whereby an ample supply of desirable labor can be obtained that great hardship will follow, which will result in severe financial loss to all. It is argued that the working of a large number of Chinese and Japanese by the planters does not interfere with American skilled or unskilled labor; on the contrary, if the successful and economical cultivation of the principal crop shall continue it means that millions of dollars will be spent for machinery, building materials, tools, steel and iron, and other supplies of American manufacture.

The amount of such purchases for this year are placed at $20,000,000. If, however, the sugar industry is allowed to decline by reason of insufficient number of unskilled laborers, there will be no money to be spent in trade. Since the annexation of the islands to the territory of the United States the immigration of unskilled laborers has practically ceased, while the Japanese and Chinese have been continuously returning to their native countries. Under the laws of the Republic Chinese were allowed to enter the country for a limited number of years upon the express condition that they engage only in agricultural pursuits. The present laws prohibit Chinese who are residents of the Territory from entering any part of the mainland. The governor, however, suggests that in his judgment a limited number may be safely admitted to the Territory for the purpose of working on the sugar and rice plantations, and that such immigration would not interfere with the labor conditions on the mainland.

The result of the first Territorial election was an overwhelming victory for the Home-Rule party. They elected their delegates to the Fifty-sixth and Fifty-seventh Congresses, and 9 out of 15 senators and 22 representatives out of a total of 30, the remaining members of the legislature being divided between the Republicans and the Democrats. The total registration of voters were 11,218; total number of votes cast, 10,163.

For the home seeker, and particularly those who appreciate life freed from its more rigid conventionalities, Hawaii presents many attractions. Social and educational advantages compare favorably with the best communities on the mainland. The climatic conditions are excellent, no extremes of heat or cold being ever experienced. Immigrants of a satisfactory class are desirable, but it is a question as to what a man of small means can do on the islands in the way of agriculture. Experiments in the working of small tracts of land by individuals have been made, but without any definite results. The growing of fruits of the temperate zone has never been systematically attempted. Citrus fruits, however, do well in many of the districts, but no large

tracts have been devoted to their culture, the amount supplied coming from trees that grow at random. The culture of the pineapple is quite extensive and large yields are made from small acreage. The cultivation of coffee by persons of small means has proved unprofitable, owing to the low prices obtained for the product and the high rate of wages prevailing.

The raising of live stock has received new life during the past two years owing to the great advance in the prices of meat. Many importations of improved grades have been made, and much capital is being invested in the enterprise. The local industry is not able to supply the meat required for consumption. Large importations of fresh meat, poultry, and fish are made, principally from California.

Attention is called to the want of protection for the food fishes of the Territory. Owing to the present methods in use by the fishermen the presence of the agent of the Fish Commissioner is asked for, and that restrictive measures be put in force at an early date.

During the monarchial régime $1,000,000 in silver coin was authorized. These coins were of equal weight and fineness of the corresponding coins of the United States. It is difficult to estimate how much is still in circulation as it is evident that a very considerable number of coins of all denominations have been used by jewelers and taken away by tourists. The authorization for the conversion of all Hawaiian coin into corresponding coin of the United States is asked for.

The construction of a submarine telegraph cable to the island is stated to be a great necessity. The large fleet of national and merchant vessels constantly calling at the ports of the islands are often placed at great inconvenience and serious loss by the absence of cable communication. It is never less than twelve and often twenty days before an answer can be received by mail, which is a great drawback to the commercial interests of the Territory.

The Marconi system of wireless telegraphy is in successful operation between Honolulu and the islands of Maui, Molokai, Lanai, and Hawaii. A message from Honolulu to Hilo goes by wire to Waianae, on the Island of Ahualoa, thence across the channel to Molokai, 28 miles; thence to Lanai, 30 miles; thence to Mahukona, Island of Hawaii, 78 miles; thence by telephone 60 miles. The poles of the highest stations range from 120 to 175 feet in height above sea level. The telephone system is of very general use in the city of Honolulu, there being 1,257 telephones connected by 1,600 miles of wire and 4½ miles of cable. The rates charged are $4 per month for business telephones, $3.50 for residence telephones, and $7.50 for country lines.

The Hilo Railway Company has constructed its track for a distance of 24 miles from the east side of the Hilo Harbor to Kapoho, in the district of Puna. Seventeen miles of the company's line is now under process of construction through the lands of Keeau and Olaa. The

railroad is of standard gauge, the rails weighing 60 pounds per yard. The equipment consists of 2 Baldwin locomotives, 40-ton freight cars, 10.30-ton freight cars, and 4 passenger cars. The company is equipped with machine shop, foundry, and woodworking shops.

The line of the Kohala and Hilo Railroad Company has been surveyed from the city of Hilo, via Hakalau and Waimea, to the port of Mahukona, in the district of North Kohala, a distance of 99¾ miles. The area contiguous to this line of railroad now under successful cultivation is about 60,000 acres. The estimated cost of construction and equipment of the road is placed at $3,000,000.

The Hilo Railway Company, chartered May 28, 1899, having a capital stock of $500,000, with an authorized capital of $10,000,000, has issued $450,000 6 per cent coupon 10-20 bonds. Track has been laid from Waiakea, at the east side of Hilo Harbor, to Kapoho, in the district of Puna, a distance of 24 miles.

One of the principal home industries is the Honolulu Iron Works, which were established in 1853, and has at present a capitalization of $500,000. The business of the company reached $1,500,000 during the past year. New works have been erected, covering an area of 6½ acres. They are located adjoining the United States Government reservation. All of the buildings are of modern construction and are equipped with the most efficient machinery and machine tools that can be obtained in the United States. The scope of the work executed by the company extends from the repairing of all kinds of machinery and iron shopwork to the building of sugarhouses of the largest capacity. The skilled mechanics employed are mostly American and the unskilled laborers are most exclusively Hawaiian, no Asiatic labor of any kind being employed. From 450 to 550 men are continuously employed, while at times the number reaches 600.

Building operations were very active in both Honolulu and Hilo during the past year. Total cost of new buildings was $4,118,122.

The progress of public instruction has been, upon the whole, satisfactory. The amount of money expended for the support of public schools during the past year was $306,299.56. Appropriations have been made for the biennial period ending June 30, 1903, for salaries and pay rolls, $652,862.50; for current expenses, $199,025. There were 559 teachers employed in the public and private schools. There were 11,501 pupils attending the public schools, 4,036 attending private schools; total, 15,537.

Irrigation is an important factor in all agricultural work. The conservation and distribution of the storm water is attracting considerable attention at the present time. The natural conditions are such as to justify the belief that great benefit can be derived from intelligent work along these lines. An investigation of this subject should be

undertaken at an early date, and thereafter suitable legislation should be enacted by Congress to authorize the erection of irrigation works.

The protection and extension of the forestry of the islands should be immediately undertaken. An investigation by an expert forester would be of great assistance in determining what action should be taken to bring about the best results. The planting of about 60 acres of forests in the foothills back of Honolulu has been accomplished. This work is still being conducted by the Territorial commissioner of agriculture and forestry, but his work should be augmented and extended under direction of the Bureau of Forestry.

The acting governor submits the following recommendations for action by Congress, to wit: The authorization of the conversion of all Hawaiian silver coins into corresponding coins of the United States; that the immigration of a limited number of Chinese laborers be authorized, conditioned upon their engaging in agricultural pursuits only during their residence in the Territory, and that upon their ceasing to do so they shall be returned to their own country; that a site be purchased and a Federal building erected in Honolulu for the accommodation of the Federal court, post-office, custom-house, and other offices of the United States; that the granting of licenses to divert water from lands where it is of no value to arid sections that are otherwise adapted to agricultural purposes be authorized; that the retention of a sufficient amount of the custom-house receipts be set aside for the use of the Territory for the payment of any judgment awarded by the commission on fire claims, and that an appropriation be made for the appointment of a deputy secretary of the Territory authorized to act during the absence or disability of the secretary of the Territory for Territorial purposes only.

New Mexico.

The report of the governor, M. A. Otero, shows that the Territory has continued to enjoy prosperity in all branches of material development during the past year, and has "made marked advance in all things which contribute to the greatness of an American commonwealth."

New Mexico covers an area of nearly 79,000,000 acres, of which about 24,000,000 acres have been appropriated under the various land laws, leaving an available unappropriated area of some 55,000,000 acres, capable of supporting a population of many millions; the estimated total population at present is 300,000, exclusive of Indians, which latter number 12,206. The governor takes strong grounds against the injustice, as he declares, which the recent census does in accrediting to the Territory a population of but 195,310 in 1900, and sets forth at length many reasons for his belief. He asserts that the registration in October, 1900, which showed 59,297 voters in the Territory, should serve as a fair basis for arriving at a just estimate of

the population; but few of the large number of voters are without families, and even among the 6,000 or 8,000 miners in the Territory, more than half have families; reckoning, therefore, five persons to the family of each voter would make the total estimated population 296,485.

The governor states that the actual taxable value of property in New Mexico is $150,000,000, and states his opinion to be that this vast sum would be more than trebled within five years after admission of the Territory as a State. So long as the question arising out of the acquisition of Hawaii, Porto Rico, and the Philippines were burning issues, says the governor, there was not much prospect that New Mexico, Arizona, and Oklahoma would be admitted, but those matters being now out of the way there seems to be no reason why the door should not be opened for all the continental Territories excepting Alaska. On the subject of the loyalty of the people of New Mexico toward the Federal Government, he refers with pride to the fact, as shown by official records, that the Territory sent more volunteer soldiers to the defense of the country per capita in the American civil and Spanish-American wars than any other State or Territory.

Under wise and beneficent laws, enacted by recent legislative assemblies, it has been possible for the first time in the history of the Territory to accumulate a surplus in almost every fund in the treasury department, which can be turned toward reducing the interest-bearing debt instead of a deficit to be met by another issue of bonds or an increased rate of taxation, and this, notwithstanding the fact that the treasurer has been enabled to call in and cancel $48,800 of certificates of indebtedness, and also $20,000 of 6 per cent and $20,637 of floating indebtedness, making a total reduction in the indebtedness of the Territory of $89,437, being a reduction of more than 7 per cent of the total indebtedness, and in addition to which there are now on hand trust funds for the redemption of outstanding bonded indebtedness to the amount of $71,658.07. The bonded debt of the Territory at this time is $1,189,974; besides paying in cash all current expenses, providing for all appropriations, and from all present indications leaving surplus balances in all funds at the end of the current fiscal year ending December 2, 1901. The Territory's standing in the financial centers of the world is stated to be first class. During the present administration all interest payments have been promptly met, the 4 per cent bonds have been sold at a premium, and from the revenue derived from the leasing and sale of lands for the benefit of the various public institutions there have during the past year been expended large sums in betterments on the public property.

Salutary laws governing insurance have been enacted which have not only proved a source of protection to the people of the Territory, but have imposed no great hardship upon the insurance corporations.

The latter appear to have enjoyed a full share of the general prosperity prevailing throughout the Territory.

Before 1850 New Mexico had been an outlying province of the Kingdom of Spain and the Republic of Mexico, neglected and uncared for by either Government, compelled to depend upon herself and her own resources, to contend against an arid climate, while at the same time carrying on war continuously for more than a quarter of a century with savage Indians within her borders. Naturally the cause of popular education suffered much, being at times entirely suspended in all save a few of the more populous communities. But after repeated appeals, covering a period of more than forty years, Congress, in 1898, passed an act donating to the Territory lands for various public institutions, and sections 16 and 36 for the benefit of the public schools. Long prior to that, however, the people of the Territory had taken the subject in hand and by legislative enactment provided an excellent system of public school laws, supported by a heavier direct tax than was ever laid in any State or Territory for the purpose, viz, 3 mills on the dollar. These laws have been materially improved from time to time, until now New Mexico has an educational system that appeals to the pride of every citizen.

The number of children of school age within the Territory is 53,008, of whom 47,700 are enrolled as pupils, with an average daily attendance of 31,008, 90 per cent of the children being enrolled on school rosters and 60 per cent in actual daily attendance. These children are educated in 800 schools, by 1,000 teachers, and the school property is valued at over $1,000,000. Illiteracy has steadily decreased. The census of 1870 (twenty-four years after the "peaceful annexation" of New Mexico by the United States, when General Kearney had proclaimed to this people the "bill of rights," which is still retained on the statute books nearly unchanged) showed that 85 per cent of the populace were illiterate. The census of 1880 reduced this to 65 per cent, and the census of 1890 brought it down to 44.49, and while the census figures for 1900 on this subject have not yet been completed it is believed that it will show this percentage has been reduced to 20 per cent.

Under the operations of the law donating the public lands above referred to there have been received from rentals of leased school sections the sum of $16,135.34 and from the 5 per cent of the money received from sales of public lands the further sum of $2,185.50, all of which has gone into the public school fund of the Territory and has been distributed among the various school districts. Besides accruing from this same source are the following amounts to the credit of the institutions named: Normal University, $10,830.62; Normal Training School, $10,830.60; School of Mines, $13,368.46; Peniten-

tiary, $14,519.45; Military Institute, $6,512.14; Blind Asylum, $32.14; Asylum for the Deaf and Dumb, $12,686.71.

The governor, in view of the present urgent needs for utilizing every possible available resource for advancing the Territory's educational development, urges that an additional grant of not less than 5,000,000 acres be given the Territory to be apportioned among the institutions named and for the objects specified in the Congressional act of June 21, 1898, and also in addition to sections 16 and 36 now available for public school purposes that there be granted sections 13 and 33 in each township to be devoted to the public school interests.

The work of the United States Court of Private Land Claims in quieting titles to the Spanish and Mexican land grants, which until recent years have retarded the development of New Mexico, is highly commended. During the past year this court has judicially considered claims covering an area of 3,669,716 acres claimed as land grants, of which 25,667 acres were confirmed as being valid grants and 3,644,049 acres rejected as grant lands and restored to the public domain.

In view of the large area reverting to the public domain by reason of the adjustment of titles by the land court, he also recommends that the Government provide some means for having this class of public lands immediately surveyed and subdivided, to the end that the school sections therein be available at once for leasing purposes under the law above referred to, thereby enhancing the benefits derived by the public schools of New Mexico through this Congressional donation. At the present time a great many applications for the lease of such school sections can not be taken up by the Territorial land commissioner because these former grants have not been surveyed and subdivided.

The increase in the number and extent of land entries during the fiscal year is an indication that New Mexico is rapidly settling up. The entries in the Santa Fe land district amounted to 349,189.54 acres. There are three other districts, and the total area of land entered was 673,161.54 acres, an increase of 151,516.54 acres over the previous fiscal year. Nearly 1,800 persons located new homesteads in the Territory during the year, filing upon 274,598 acres, indicating the healthy growth and development of the Territory and its capacity to provide new homes for the western immigrant.

New Mexico State buildings and their value are given as follows: A new capitol, $400,000; penitentiary, $500,000; college of agriculture and mechanic arts and agricultural experimental station, $98,000; asylum for the insane, $79,731; school of mines, $65,000; university, $60,500; normal university, $58,570; military institute, $53,460; historic official palace, $30,000; normal training school, $28,000; asylum for deaf and dumb, $6,000; total, $1,378,261.

During the year there were incorporated five railway companies, with a capitalization of $16,561,500, to build 730 miles of railroad and engage in town building and kindred enterprises, as against two railroad corporations filed the previous year, with a capitalization of $3,500,000, to build 130 miles of road. The construction of new railroads within the Territory for the year will amount to nearly 1,000 miles. The railroads now in operation or under construction have a total mileage of 2,180 miles.

A gratifying activity is shown in the growth of manufacturing enterprises of various kinds, employing 2,600 persons, whose wages amount to $1,350,586 annually, and the value of such manufactures has increased from $1,516,195 in 1890 to $5,605,783 in 1900. The important industries at present are the smelting of copper and other ores, the manufacture of breadstuffs, of sugar from beets, the scouring of wool, tanneries, etc. There are also in operation a number of fruit canneries and distilleries. Such diversified industries as pertain to woolen fabric, blanket, and knitting factories, etc., tanneries, shoe and harness making establishments, iron and steel mills, marble yards, and stone-polishing plants are now needed throughout New Mexico. Those contemplating the establishment of potteries, lumber, flour and grist mills, creameries, fruit distilleries, wineries, and canneries will also find here an inviting field.

Mining for the useful and precious metals has been extremely active throughout the territory during the year, and a very large area of coal and iron lands has passed to private ownership. Much attention also is being given to oil lands. The organization of 84 companies, with a capitalization of $67,435,000, indicates what is going on in the direction of developing the precious and useful metals, oils, etc. The coal and coke industry gives employment to 2,000 persons. The coal output for the fiscal year is 1,217,530 tons, valued at the mines at $1,606,174. The coke production is 42,732 tons, valued at the pits at $117,516.25.

Continuous daily shipments of iron ores have been made throughout the year from New Mexico points to the bessemer-steel plant in Colorado. They have been large, but no record is obtainable on the subject. Of gold, silver, lead, and copper the product for the past year is estimated at about $6,000,000, and the value of turquoise mined is in the neighborhood of $100,000.

Several of the most extensive irrigation systems in the country are in operation in the Territory. The Pecos Valley storage reservoirs are by far the largest in the United States. A commission on irrigation and water rights, established by legislative enactment, is administering to excellent advantage the lands donated by Congress for the establishment of water-storage plants within the Territory. Of the 600,000 acres available for this purpose the commission has already

contracted with private individuals for the reclamation of about 220,000 acres.

And while New Mexico is making rapid strides in the development of her strictly agricultural and horticultural interests, the chief industry is that of live stock. From January 1 to June 1, 1901, 97,205 head of horned cattle were sold and shipped out, and for the year ending June 30, 1901, 169,274 head of steer cattle were disposed of, realizing over $4,000,000. The large herds in the Territory were increased during the year by the shipping in of some 14,274 head of stock for breeding purposes. More sheep are produced than in any other State or Territory in the Union; the wool clip bids fair to pass the 20,000,000-pound mark this year. The spring lamb crop was in the neighborhood of 1,200,000, thus bringing the total number of sheep up to nearly 5,000,000 head.

The governor states that there are still many opportunities for the investment of capital in irrigation projects, coupled with colonization and town-building enterprises, that would bring profitable returns. Agriculture generally is on a most satisfactory basis; the cultivation of the sugar beet is receiving much attention, the soil and climate being peculiarly adapted to its production. Alfalfa growing is making rapid strides, as within a few years stockmen have given up entirely their old range methods and have gone to fattening their own cattle, sheep, and hogs on alfalfa produced at their homes rather than send their stocks to Kansas, Nebraska, and Missouri to be fattened on corn.

There are in the Territory two national forest reserves, one on the headwaters of the Pecos River in the northern part, and one on the Gila over in the southwestern part, comprising 3,701,040 acres. For timber and grazing these tracts are most desirable, and along the streams are splendid agricultural lands. The governor expresses the opinion that New Mexico has lost heavily in prospective growth and wealth by the segregation of this vast empire from the public domain. He admits the correctness of the principle that preservation of the forests at the headwaters of streams throughout the West protects the water supply in the valleys, but contends that all such benefits can be secured by reducing the area in these reserves, and without unnecessary restrictions or total prohibition of grazing thereon. He takes issue with the theory that grazing these lands destroys the timber, and makes an earnest appeal in behalf of those settlers who, as well as their ancestors for untold generations, have derived a large share of their living from grazing their flocks upon these arid mountain ranges, and from which they are now barred. The rapid transformation of the Indian tribes of the Territory from semibarbarism to a reasonable degree of civilization is commented on; for years, he states, there have been no Indian disturbances, and their advancement in all the walks of

a higher life is marked to an encouraging degree. In the several Government schools in New Mexico are 1,700 Indian pupils.

An interesting chapter in the report is devoted to the thermal springs of New Mexico, of which there are a great variety, both hot and cold, in many sections of the Territory. Much space is also given to the public health, the remarkable salubrity of the climate, and its effects upon tuberculosis and kindred diseases. The fact that the Government has in so far officially recognized the superiority of the Territory's natural climatic conditions, an important element of wealth in itself, by establishing Government sanitariums for the sick of its military and marine branches at Forts Bayard and Stanton, respectively, is referred to in commendatory terms, and a technical review of the results thus far accomplished is given. Several large private sanitariums are conducted at various points throughout the Territory, and many recoveries of patients suffering from consumption, through the effects of the pure air, altitude, and sunshine, without the use of medicine or drugs, are reported.

Detailed reports are given of the status of the various eleemosynary institutions of the Territory, which show New Mexico to be in this respect fully abreast of the spirit of the times. The moral and social status of the Territory is reported as excellent, and the vast amount of data presented regarding the operations of the judicial branch of the Territorial government indicates the general good order prevailing throughout the year and the utmost security of life and property in this Territory under the present administration of public affairs.

By legislative enactment an annual appropriation of $5,000 is provided for meeting the expense of a geological survey of the Territory, to be made under direction of the United States Geological Survey Bureau. This is greatly needed, owing to the rapid development of the mines, and an appropriation by Congress of a similar amount to aid in expediting this important work is desired.

The governor makes an urgent appeal to the Government to reassume the custody and control of the historical official residence of the various governors-general under Spanish and Mexican rule, known as the "Old Palace" and located at Santa Fe. He recommends that this public structure, of most unique and interesting history, be utilized as a southwestern branch of the Smithsonian Institute, and suggests the wisdom of establishing therein a museum made up of articles taken from the cliff-dwellers' region so near at hand.

Oklahoma.

The report submitted by the governor, William M. Jenkins, is a comprehensive presentation of the growth, progress, and resources of the Territory, its present advantages and future possibilities. He attributes the general prosperity and progress not only to the natural

advantages of the country but to the character of the people, and to the fact that the entire Territory has been opened under the homestead laws.

The population as given by the census of 1900 was 398,331, an increase during the decade preceding of 544.2 per cent. Since the taking of the census the population of the settled counties has increased more than 60,000, and the large influx due to the opening of the Kiowa and Comanche lands added 50,000 more, making the population at this time in excess of half a million.

The people of the Territory are distinctively American, less than 5 per cent being of foreign birth, and the per cent of illiteracy is less than in three-fourths of the States.

Social life in the Territory has generally the same aspect as in the States, without, however, there being any class distinctions. The community is a thoroughly democratic one, where all have equal opportunities for advancement and preferment; there are neither any very rich nor any pauper class, and the homes of all the people are reasonably supplied with the comforts of life.

The taxable value of property for the year 1901 is $60,464,696, an increase of $11,126,035 over 1900. Of this amount $4,538,375 was railway property, $17,279,809 farm lands, $8,620,567 town property, $2,552,932 moneys and credits, and $28,631,013 other personal property. Farm lands were returned at an average of $3.45 per acre. Cattle at $12.58, horses at $17.14, sheep at $1.30, and hogs at $2.46 per head, which shows the property is returned at a very small part of its real value. Taxes in the Territory have, as a rule, not been much higher than in the States adjoining. The Territorial tax has been less than that of the State taxes of most States, the levy for 1901 is 7½ mills, an increase of 2.35 mills over last year, almost the entire increase being for the erection and payment of buildings for educational institutions. The total Territorial indebtedness on June 30 was $466,220.13, or about $1 per capita. Of this indebtedness, $48,000 is in bonds issued for the erection of educational buildings the first year of the Territory's history. The balance is a warrant indebtedness, having accumulated by casual deficit from year to year. A detailed financial exhibit is given showing the condition of every Territorial fund, and also a complete statement from the Territorial treasurer of the cash on hand, which amounts to a total of $258,590, as an offset against the indebtedness mentioned.

The public school system of Oklahoma is excellent. It embraces rural, town, and city systems, together with higher educational institutions, including university, agricultural, and normal schools, the whole scheme of education being a graded course running from the lowest class in the district school to the highest in the university. There are in the Territory 2,096 school districts and 1,930 school-

houses, in addition to the higher institutions, which are not included in this enumeration. There is scarcely a home in the Territory that is not within easy reach of a good public school. Two thousand and ninety-six schools were taught during the last year, and the enumeration of the school children for the Territory was 114,737, the total amount expended for the carrying on of the common graded schools being $686,095. The Territory has five higher educational institutions—the university at Norman, the Agricultural and Mechanical College, at Stillwater; the Oklahoma Normal School, at Edmond; the Northwestern Normal School, at Alva, and the Agricultural and Normal University, for colored students, at Langston. Provision was made at the last session of the legislature for the establishment of the Southwestern Normal School at Granite, Greer County, and for the University Preparatory School at Tonkawa, Kay County. The building for the Southwestern Normal School, to cost about $50,000, and that for the University Preparatory School, to cost nearly $20,000, are now in course of erection, as are also new structures at the university and agricultural college and the college for colored students, costing from $30,000 to $80,000 each. The aggregate attendance of these institutions during the past year was 1,887 students.

In addition to the Territorial colleges there are a number of sectarian schools in the Territory, and the Government conducts sixteen schools for the education of the Indian children and youth, the most prominent of which is the Chilloco Industrial School in Kay County, which has an attendance of something over 400 Indian students.

Oklahoma early sought provision for the permanent endowment of the public schools of the Territory as well as provision for the funds to insure the erection of public buildings for the State. As a consequence, as each portion of the Territory was opened to settlement, certain lands were reserved for public schools and other lands for the higher institutions of learning as well as some for the erection of public buildings. These lands amount at this time to 2,050,000 acres, which were held by the Territory in trust for the future State of Oklahoma, about three-fourths of the lands being for the common schools. These lands are all leased for agricultural and grazing purposes and net a large revenue to the schools and colleges as well as provide a rapidly increasing public-building fund. The care and management of these public lands have come to be one of the most important departments of the Territorial business, the receipts for the past year having reached $213,303.67, and it is estimated that they will reach $300,000 the coming year. The net proceeds from leasing these lands since the organization of the Territory has been $1,046,857.99. During the year settlers homesteaded 1,196,994 acres of land in small tracts throughout the various counties in the Territory. There are still vacant and subject to homestead entry 4,414,643 acres of Government

land exclusive of the large area of the Indian reservations which has mostly been settled before this time.

Churches and other religious and charitable organizations are well represented in the Territory. The statistics given show the church membership to be over 65,000 and the value of church property half a million dollars.

There are 113 Territorial and 31 national banks, an increase of 34 Territorial and 20 national banks during the year. The aggregate resources of all of the banks in the Territory is $16,495,465.58. Their deposits are $12,512,016.51, an increase in deposits of over $6,000,000 for the year. There are four local cooperative building and loan associations in the Territory, that have about $120,000 invested in real estate securities among their numbers.

Oklahoma offers an inviting field for the investment of capital in manufacturing and commercial properties as well as in lands, mortgages, bonds, and other private and public securities. Territorial, county, and city securities, which several years ago went begging in the markets at 85 and 90 cents on the dollar, now command a premium, and the rapid development of the Territory and advance in prices of land and other property has caused investors to realize handsomely on their Oklahoma investments. There has never been any attempt at repudiation, and there is at present practically no interest in default on Oklahoma securities of any kind. Farm loans are now being freely made at 6 per cent by outside investors. Mortgages of outside investors are exempt from taxation, and the laws of the Territory are extremely favorable to capital.

Twenty-one life insurance companies, licensed to do business in the Territory, wrote $2,408,617.44 of insurance in 1900, collected $161,072.79 in premiums, and paid $39,871.50 in losses. Forty-two fire insurance companies wrote $22,778,912.62 of insurance, collected $373,510.92 of premiums, and paid $103,751.42 in losses. There was also $3,309,177.69 of miscellaneous insurance written by fidelity, accident, and casualty companies, upon which was collected $15,619.50 and $8,875.51 paid. Four local farmers' mutual associations wrote $4,331,954.02 fire and hail insurance, collected $141,290.40 in assessments, and paid $108,051.56 in losses.

There are 1,075 miles of railway in operation, of which 215 miles was built during the past year, and at this time fully 400 miles additional are in progress of construction. The railways of the Territory include four trunk lines—the Atchison, Topeka and Santa Fe, the Chicago, Rock Island and Pacific, the St. Louis and San Francisco, and the Choctaw, Oklahoma and Gulf—giving connection with all the important markets of the Union. There are also two independent lines, the Choctaw and Northern and the Blackwell, Enid and Southwestern railways, in operation. All but three of the counties of the

Territory are reached by railways, and roads will be built into two of these inside of sixty days. The railway mileage of the Territory is, however, very small as compared with that of States of equal area and population.

The commerce of the Territory is very extensive for a new country. The products of the farms, orchards, ranges, and factories are shipped not only to the various markets of America, but to many foreign lands. Oklahoma grain is going constantly to Europe, cotton to Liverpool and Japan, flour to South America and England, and other articles to various foreign ports. The shipments in and out of the Territory of the more important articles of commerce were as follows for the year:

Shipments out of the Territory: 9,850 cars of cattle, 4,171 cars of hogs, 106 cars of sheep, 104 cars of mules, 344 cars of horses, 24,522 cars of wheat, 1,860 cars of corn, 66 cars of castor beans, 768 cars of cotton seed, 85 cars of hay, 113 cars of melons, 4,785 cars of flour, 2,074 cars of other mill products, 314 cars of oats, 703 cars of cotton by car lots and 68,925 bales in addition.

Shipments into the Territory: 1,057 cars of farming implements, 361 cars of vehicles, 1,053 cars of machinery, 1,053 cars of flour, 2,743 cars of household goods of immigrants, and 15,030 cars of coal.

The climate of Oklahoma Territory is mild, healthful, and pleasant, the rainfall being sufficient for growth of agricultural crops and the seasons admirably adapted to the growing and harvesting of grains, fruits, and other products. The average rainfall over the Territory is from 30 to 40 inches per annum, well distributed through the growing season. The great diversity of crops which can be successfully grown throughout the Territory gives the farmer an advantage over his colaborer in other States. Nowhere else can the three great staples of wheat, corn, and cotton be successfully produced upon the same farm, together with a large number of by-products, including oats, kafir corn, castor beans, peanuts, melons, potatoes, broom corn, in addition to all varieties of fruits and vegetables. The wheat crop of the Territory this year is 25,000,000 bushels, the cotton crop of last year reached 140,000 bales, and the corn crop was fully 60,000,000 bushels. Wheat the present season averaged fully 25 bushels per acre the Territory over, and tested from 60 to 65 pounds per bushel. In many sections of the Territory a specialty of growing potatoes, melons, peanuts, and castor beans is made, with profitable results. The mild climate and rich and nutritious grasses and abundant water make Oklahoma a most desirable stock-raising country. The number of head of live stock returned for taxation the past year was as follows: Horses, 36,235; mules, 52,581; cattle, 617,752; sheep, 42,007, and swine, 277,289. The stockmen are all improving their herds, and the general prospect for them at this time is reported as favorable in all parts of the Territory.

Many fine horses have been produced, and Oklahoma-bred trotters are making records upon the leading tracks of the country.

The fruit industry is flourishing. Oklahoma peaches especially are known in most of the markets of the country, and are not surpassed anywhere for size, color, and flavor. The Territory seems to be the natural home of the peach, and the trees produce at a remarkably early age and in an abundant quantity. Apple growing, too, has become successful in the Territory, and many fruit growers predict that the Territory will be as fine an apple country as southern Missouri and northern Arkansas. The very finest apples are shown here as products of the home orchards. Pears, cherries, quinces, apricots, and early small fruit berries do exceedingly well. The grape crop is very large, maturing early and bearing profusely. The very best of wines are now being obtained from the Oklahoma grape.

There is a large demand for Oklahoma farm lands by immigrants from the North and East. During the month of April, 1901, there were 885 sales of farm lands made in the Territory, the aggregate number of acres transferred being 121,511 and the total price paid being $1,905,077. The highest price paid was $800 per acre; the lowest, 62 cents; the average, $13.39.

The passage of the free-homes law by Congress has been of untold benefit. This measure relieved the settlers of payments for land aggregating $15,000,000, and this amount of money, instead of going to the Government, has been kept in the Territory and invested in houses and barns and live stock for the farms and comforts for the family, and was a prominent factor in bringing about the general condition of prosperity. The second result has been the attraction of a large immigration to the Territory of settlers coming in to take up homestead lands made wholly free by the passage of this bill. The enactment of this measure has also resulted in a large increase in the area of taxable land by causing the farmers to prove up on their homesteads, this increase amounting to 1,737,000 acres for the current year. The governor asserts that none are idle in Oklahoma except from choice and that the demand for labor is generally in excess of the supply.

Oklahoma products have won many high awards at every exposition where exhibited, the latest distinction for the Territory in this line being the highest award in cotton at the Paris Exposition. Commissioners are already preparing an exhibit for the Louisiana Purchase Centennial Exposition at St. Louis, where the Territory hopes to do as she did at the Omaha Exposition—exhibit the greatest variety of successful farm products of any State in the Union.

The governor pays high tribute to the press of the Territory and embraces in his report a complete directory of the publications,

which consist of 22 daily, 168 weekly, 20 monthly, and 4 semimonthly periodicals.

The insane and deaf mutes and convicts of the Territory are cared for by contract. There are 315 insane patients in the asylum, and the cost for caring for the same the past year was $56,369.90. In the deaf mute institution 54 scholars are being cared for and educated at an annual cost of $13,041.88. The number of prisoners in the penitentiary on July 1 was 252, the cost of care and transportation during the year having been $33,172.31.

The laws regulating medical practice, dentistry, and pharmacy are adequate and well enforced; the public health is well looked after by the Territorial board of health; the climate of the Territory is so favorable that there is very little disease of an infectious or contagious nature, and lung troubles are at a minimum.

The general geology of the Territory indicates an agricultural and grazing community. There are indications of minerals in but a small portion of the Territory, and limestone is absent everywhere except in the extreme northeast and southwest. The hills and canyons of middle western Oklahoma and the mountains in the southwestern portion of the Territory show more or less indications of mineral. There are some fine ledges of limestone in the northeast portion of the Territory, and the granite quarries in the southwestern portion will soon be famous. Coal is found in several localities, but very little of it has been mined. There are indications of copper, lead, and zinc, and other minerals at some other places. Copper has been mined with some profit, and oil and gas have been found in some parts of the Territory. The undeveloped resources include the mineral deposits, stone ledges, and immense beds of cement and salt, as well as opportunities for tanneries, more extensive fruit growing, and the converting of the many raw products of the Territory into finished articles of commerce.

The counties of the Territory are, as a rule, well governed, and generally prosperous conditions exist. The governor gives detailed information of all the conditions in each county, which would be desirable information for an intending settler. The cities of the Territory are well governed, have modern, up-to-date improvements, including waterworks, electric lights, parks, good sidewalks, and proper fire and police protection. There are 15 cities of the first class in the Territory with a population in excess of 2,500, two of them having populations of over 10,000.

There are 681 towns listed on mercantile reports and 134 wholesale houses, employing 960 men. During the year 300 business blocks and 3,219 residences were erected in the different cities. Manufacturing industries are yet but limited, there being but 868 factories in operation, employing 2,055 hands, with an aggregate pay roll of $807,826. The aggregate capital invested is stated at $3,357,000.

There are 800 flouring mills in operation, with an aggregate output of 7,005 barrels per day.

The Indian population of the Territory is stated to be 12,919, and the opinion is expressed that the red man is slowly advancing in the ways and arts of civilization. A detailed account of the conditions at each Indian agency is given. But four Indian reservations, embracing a total area of 1,725,647 acres, yet remains unsettled, and the governor urges immediate allotment of lands to the tribes thereon and the opening of the residue of land to settlement under the homestead laws.

The recent opening of the Kiowa and Comanche and Apache and Wichita Indian reservations is discussed by the governor, and the plan of registration and drawing devised by the Secretary of the Interior commended as satisfactory, and a great improvement upon the old method of wild scramble. The sale of town lots in the county seats is also highly commended and legislation recommended to give a portion of the receipts to the towns for municipal improvement and to allow the using of a sufficient amount to erect schoolhouses throughout the counties. The conditions prevailing in the Indian Territory are discussed, and upon the plea that it seems to be the intention of Congress to ultimately unite the two Territories as one State it is urged that early action be taken to solve the problem presented there, to put the people under the same laws as those governing Oklahoma, to provide for the education of the children, and to create the public highways, so necessary to the proper development of a free American community.

In addition to the recommendations the governor strongly urges the enactment of a uniform measure relating to all school, college, and public building lands; the cession of all vacant public lands in western Oklahoma, amounting to over four million acres, to the Territory in lieu of public lands lost in the eastern portion, and the increase of the Territorial supreme court bench from five to seven members.

Porto Rico.

Commissioner of the Interior for Porto Rico.—Section 24 of the act of Congress approved April 12, 1900, entitled "An act temporarily to provide revenues and a civil government for Porto Rico, and for other purposes," provides as follows:

> That the commissioner of the interior shall superintend all works of a public nature, and shall have charge of all public buildings, grounds, and lands, except those belonging to the United States, and shall execute such requirements as may be imposed by law with respect thereto, and shall perform such other duties as may be prescribed by law, and make such reports through the governor to the Secretary of the Interior of the United States as he may require, which shall annually be transmitted to Congress.

The report of the commissioner of the interior of Porto Rico gives the general résumé of the work in the island under his supervision,

showing that substantial progress has been made and that the prospects for the future can be regarded as reasonably bright.

It is shown that with the abolition of the board of charities and the transfer of its powers and duties to a director of charities and the executive council, the shifting of the division of patents, trade-marks, and labels to the department of the secretary of Porto Rico, both by legislative enactment, and the addition of the bureau of insular telegraph, the organization of the department stands as follows: The board of public works, the superior board of health, the bureau of agriculture and mines, the bureau of insular telegraph, the division of lands and forests, and the division of archives, each of which is coextensive in its ramifications with the island boundaries and in its operations of real importance and value to the people in the support and development of commercial, industrial, and social life, the whole making of the department of the interior, properly conducted, an institution of supreme utility to a successful administration of the government of Porto Rico, the revival and endurance of prosperity, the peace, comfort, and happiness of the people.

The matter of public lands, it is stated, continues as a vexatious and annoying problem. A searching investigation of titles throughout the island is first needed, and then careful surveys of all public lands should be made. Upon the presumption that the titles to all lands not held by legal claim of private ownership had passed by the treaty of Paris to the United States, no provision has been made by the insular government to determine the location and extent of such lands, and the Department has been handicapped both by lack of authority and the means to prosecute the work with any sort of vigor. It is not practicable, therefore, to report any material additions to the list of public lands which accompanies the previous report. The Commissioner notes with pleasure the Department's recommendation to Congress on this important matter, and expresses the hope that suitable means and the necessary appropriation for a speedy determination of the location and quantity of public lands in Porto Rico will be provided by the next Congress.

The Commissioner calls attention to a phase of the question not heretofore suggested or discussed. Quoting Article VIII of the treaty of Paris, and certain articles from the civil code of Spain extended to Porto Rico, the first reciting what was ceded and what rights were reserved to provinces, municipalities, etc., the second declaring all property to be of public or private ownership and defining and classifying each, he claims that there were no "Crown" lands in Porto Rico at the date of cession; that the so-called "public" lands understood to have passed to the ownership of the United States by the terms of the treaty were, in fact, "private" lands belonging to the "State," and, as such, are the property of the people of Porto

Rico and subject to disposition by the insular government, as was the case under Spanish domination.

The matter of roads and bridges, particularly from the interior to the seacoast, has claimed the earnest consideration during the past year. The importance of these outlets from the productive coffee, tobacco, and fruit regions is shown, and the means employed to relieve interior communities and encourage the people to clear and cultivate the lands with the assurance of profitable returns are set forth in detail. The total of appropriations from the insular treasury for the fiscal year for contingent expenses and salaries, construction and maintenance of public highways, was $478,974. The cost of maintenance grows as sections of new road are added, and even now presents an aggregate of expense which forbids contemplation of the construction of roads from insular revenues until the taxable resources shall have been materially augmented or business conditions may warrant a higher tax rate than is now deemed prudent or wise. The commissioner, however, notes that the liberality of the Congress of the United States, as exemplified in the appropriation for refunding customs duties, provided a fund with which many miles of good road may be constructed. A portion of it, under allotment by the President, was applied to road construction by the late military government, and the work of completion has been taken up where the army engineers were compelled to leave off. The balance of the appropriation allotted to road building, it is stated, will be deemed a sacred trust and its expenditure guarded with zealous care, to the end that every dollar paid shall return its equivalent in benefit to the people.

Two hundred and fifty-three and six-tenths kilometers of road was built by the Spanish Government with state (insular) aid during the four centuries of its rule, against 134.4 built by the United States military and the insular civil governments within the past three years. The extent of road construction contemplated, contracts, maintenance, and surveys are presented in detail, together with a number of photographs of old and new roads, bridges, and road cuts, designed to illustrate the character of and somewhat the obstacles to road construction in Porto Rico.

Concerning the matter of public buildings, attention is called to the report of the board composed of officers of the Army and Navy appointed "to examine and report respecting the part of public lands owned by the United States in Porto Rico required for the use of the military and naval establishments," and a strong protest is entered against certain properties, especially buildings alleged to have been constructed with funds collected from insular taxes and imposts and in equity the property of the people of Porto Rico, being retained by the United States Government.

The public health as cared for by the superior board of health is given the prominence warranted by the importance of the subject as a means of promoting habits of cleanliness, right living, the avoidance of disease, the comfort and enjoyment of the people. It is made quite clear that in spite of conflicting and ill-directed laws, bad sanitary conditions primarily, lamentable ignorance by the people of the simplest rules of health, strong prejudice against a change, insufficiency of funds, and lack of intelligent medical assistance in the rural districts the board has warded off all threatened epidemics common in the Tropics, has wrought material changes for the better in sanitation, largely improved the quality of food stuffs offered for sale, and has interested the people in the benefits to be derived from observance of the rules and regulations prescribed. The health conditions during the past year have been comparatively good, and the results of the work of the board are encouraging.

The condition and needs of the agricultural interests, upon which the commissioner believes that the enrichment, comfort, happiness—indeed, the very existence of the masses depend, is clearly and forcibly presented in the report. It is shown, however, that by reason of the failure of the Territorial legislature, in anticipation of an appropriation by Congress for the establishment of one or more agricultural experiment stations on the island, to make any financial provision for the bureau, it has not, in consequence, been able to render very much assistance in agricultural development.

The mining interests of Porto Rico have not been deemed important, although it is known that there do exist deposits of gold, copper, iron, and other minerals, and it is alleged that placer mining was carried on profitably many years ago. Of late more or less prospecting has been done, and, as a result, there has been an appreciable increase in the numbers of mining applications filed. Reports of valuable discoveries have gained circulation, but allegations as to their richness lack confirmation.

Under Spanish régime the telegraph system of Porto Rico belonged to the Government. It was an elaborate and expensive organization; its lines extended to every town, and it furnished many sinecures for favorites. When the United States Army invaded the island, the Signal Corps took charge of the stations as the troops advanced, and, finally, of the whole system, substituting modern instruments for the antiquated tape instruments in use and restoring the lines, which were generally out of order, to a serviceable condition. The hurricane, however, of 1899 practically destroyed the lines. The Signal Corps restored communication only between the cities and larger towns, leaving the system very much reduced in extent, and in this condition it was turned over to the Department of the Interior on February 1, 1901. It was well understood that the receipts would not

pay the expenses. The system has been organized on the most economical basis conceivable, a few abandoned offices have been reopened, and the margin of expenditures over receipts has been kept encouragingly small.

The labor of cleaning, examining, classifying, filing, and indexing the old public records committed to the care of the Department has been steadily pursued, and, although the end is not yet in sight, good progress is being made, and the archives will eventually be in shape for ready reference.

In conclusion the commissioner avers that, notwithstanding the deplorable condition of the laboring classes at the time of the cession of Porto Rico to the United States, the awful destruction of life and property and consequent misery and woe wrought by the hurricane of 1899, the injury to trade and commerce caused by the necessary change in the circulating medium, and in spite of pernicious opposition to and malicious representation of the methods and policies adopted and pursued, there are, in all matters relating to the Department of the Interior, evidences of substantial progress made, and the prospects for the future are reasonably bright. There remains much to be done; indeed, it would seem that only a fair beginning has been made, yet the commissioner expresses the belief that with the exercise of patience, industry, wise discretion, and zeal, the speedy habilitation of Porto Rico as a veritable garden spot, rich and prosperous, and the people fully employed, contented, and happy are conditions that may be confidently predicted. Capital is needed for restoration of old plantations, the opening up and cultivation of new estates. Investigation by persons interested in fruit culture has, as a rule, proved satisfactory. Some have invested and are planting; the prospect is that others will soon be at work. It is predicted that in the near future fruits and vegetables will become large and profitable features of the agricultural industry of the island and a leading item in the exports to the United States.

In discussing in my last annual report the legislative needs of Porto Rico I recommended that Congress confer specifically upon the Secretary of the Interior supervision over the public lands in the island; that suitable means be provided, by commission or otherwise, to ascertain the location and the quantity of lands title to which remained in the Crown at the date of the cession of Porto Rico to the United States; that adequate appropriations, coupled with authority for surveys, be made, and that the methods of the disposition of such lands be prescribed by law. The best interests of the island will be subserved by the carrying into effect of these recommendations, and I therefore renew them and urge favorable action thereon.

COMMISSIONER OF EDUCATION FOR PORTO RICO.—Section 25 of the act of Congress approved April 12, 1900, entitled "An act tempora-

rily to provide revenues and a civil government for Porto Rico, and for other purposes," provides as follows:

That the commissioner of education shall superintend public instruction throughout Porto Rico, and all disbursements on account thereof must be approved by him; and he shall perform such other duties as may be prescribed by law, and make such reports through the governor as may be required by the Commissioner of Education of the United States, which shall annually be transmitted to Congress.

The report of the commissioner of education for Porto Rico is naturally mostly on account of the public elementary schools of the island as reorganized since the American occupancy. The year 1901 found nearly 34,000 children in school, and the commissioner estimates that next year 50,000 will be enrolled. For these pupils 1,000 teachers will be required.

The total population of the island is 953,243, and the school population, 322,393; the number of schools open at end of year was 733, of which 132 were boys' schools, 71 girls', 528 mixed, and 2 night schools; the average number of schools open each month was 698. The number of buildings in use for schools was 120 in towns and 387 rural, aggregating 507. There were 489 white male teachers employed at end of year, 250 white female, 42 colored male, 31 colored female, aggregating 812 teachers. The total number of American teachers employed during the year was 104.

The number of pupils enrolled at the end of the year was 33,802; of these, 15,542 were white and 5,695 colored, boys, and 8,763 white and 3,802 colored, girls. The total number of boys was 21,237, and of girls, 12,565. The average daily attendance during the year was 23,453. The per cent of total population enrolled in schools was 3.5, and the per cent of colored pupils in total enrollment was 28. Estimated value of all school property was $213,465.97.

The summer normal school at San Juan was attended by over 800 teachers in 1901. A large building for the normal school is under construction at Rio Piedras, and will be opened about November 21, 1901.

There are 39 new school buildings completed and in use, the teaching corps has been reorganized, a system of agricultural schools gives practical instruction to about 1,000 students, and a high school is in operation at San Juan. The annual budget has been increased from $400,000 to $500,000, and the schools are now equipped with all necessary books and supplies, while the school year extends to nine months in the year. There are 100 American teachers now on the island. Free transportation for teachers between New York and San Juan was discontinued in June, 1901. The salary of American teachers is fixed at $40 per month, for nine months, in cities of less than 5,000 population. In larger cities it is $50 per month for the same time. Teachers' institutes were held in 15 places in the island during the summer

of 1900 and summer schools were opened in 16 districts. In January, 1901, the sum of $200,000 was transmitted to the treasurer of Porto Rico from the United States Treasury, by direction of the President, to be used for school buildings, and suitable buildings are in course of construction in all parts of the island. The school maintenance fund of $501,000, allotted under the civil government, is 25 per cent of the entire insular budget. It is independent of $235,000 destined for school extension. The free public library in San Juan has 7,400 volumes. Provision has been made by the legislature of the island to send a limited number of young men and women to complete their education in the United States.

Inspectors of Coal Mines in the Territories.

By act of Congress approved March 3, 1891 (26 Stat., 1104), the President was authorized to appoint, at an annual compensation of $2,000 each, a mine inspector in each organized and unorganized Territory of the United States wherein were located coal mines, the aggregate annual output of which would be in excess of 1,000 tons per annum. Appropriation is now made annually by Congress for two such inspectors—one of the Indian Territory and the other of the Territory of New Mexico.

Indian Territory.—Luke W. Bryan, the mine inspector, reports that the coal business in the Territory is in a flourishing condition; that there has been a great increase in the output of coal, 2,391,688 tons having been produced, as against 1,900,127 tons during the previous year. Many improvements, especially in the matter of the opening of new shafts and slopes, are now well under way, which promise a much greater increase in the matter of actual production during the next year.

Many of the leases for which applications were heretofore made under the Curtis Act have been perfected, and a number of applications have been presented for new leases. The extension of various lines of railroad through the Territory is opening up new coal fields, and many of the States in the Union are evincing an active interest in the coal mines of the Territory. Many of the veins of coal recently opened in the various mines are of a steeper pitch than any that have heretofore been successfully worked. For many years it was thought that it would not be possible to work such veins at a profit, but improved methods, recently inaugurated, have demonstrated the practicability of successfully working such veins.

The inspector called attention to the fact that another feature of the new methods of operating in the Territory is that of sinking deeper shafts, and he expresses the opinion that the coal mining of the future in the Territory must be done through the use of much deeper shafts than have heretofore been sunk.

There are over 280 coke ovens in the Territory, 230 of which are in actual operation, and 50 nearly completed. Eighty of these ovens are operated by the Osage Coal and Mining Company at or near Krebs, Ind. T.; 50 at Alderson and 100 at Howe are operated by the Mexican Gulf Coal and Transportation Company. The latter company, however, is now in the hands of a receiver. The total production of coke for the past year was 34,900 tons. Of the 28 individuals and corporations operating mines within the Territory, all have not submitted reports as to the number of employees, but from those received it may be said that the average number of men employed in the coal mines in the Territory is approximately 4,988.

During the year there were 139 accidents due to various causes, 44 of which were fatal, as against 89 accidents during the previous year, 40 of which were fatal.

The inspector states that considerable effort has been made in the direction of carrying out and making efficacious the act of Congress approved March 3, 1891, for the protection of the lives of miners in the Territories, and to this end he has made many suggestions to the operators in regard to improving the air courses, escape ways for men, the furnishing of sufficient pure air to the face of workings, the institution of shot firers in mines where the coal dust has been considered dangerous and explosive, and the prevention of the employment of children under the age of 16 years.

The inspector states that he has universally been assisted by the mine operators in the discharge of his duties, and that suggestions for the betterment of the condition of men and mines have been cheerfully received and promptly and faithfully carried into effect in the most practical manner possible. He regrets the material increase shown in the number of accidents during the past year over that of the previous, but expresses the opinion, however, that there are periods in the Indian Territory when, owing to the extremely gaseous condition of mines and the explosiveness of the coal dust, there appears to be an epidemic of explosions, and the year just passed is one that has been particularly marked in that regard. As an instance, the explosion at mine No. 5, operated by the Osage Coal and Mining Company, may be cited as one involving greater damage to the mine than has ever been wrought by any mine explosion in the Territory; loss of life, however, was confined to but three men, owing, doubtless, to the employment of shot firers. Results in this case evidence the advisability of the employment of shot firers in all gaseous mines; for, in the case of mine No. 5, there were some 300 or 400 men employed, and had this shot been fired while the men were in the mine, they would, in all probability, have been killed.

Special attention has been given to the character of all the machinery in use, and care was taken to see that all catches were properly bonneted and fully supplied with safety-catch attachments.

The past year has been particularly free from labor troubles, although a nominal strike has been in progress in the Indian Territory, the United Mine Workers' Association having declared the Territorial strike during the whole of the year; nevertheless, the mines have all been able to secure necessary labor and to run on good time. In order to operate the mines successfully during this nominal strike, it was necessary to employ men from the different States, they being more or less inexperienced as to the conditions existing in the mines in the Territory; that fact has, doubtless, been another factor in the increased accidents that have occurred. The inspector, however, expresses the opinion that in the majority of instances accidents have been caused by the deliberate violation of the rules of the company and of those rules and customs which careful and cautious miners always observe.

NEW MEXICO.—Jo E. Sheridan, mine inspector, reports that the provisions of the act of Congress providing for the protection of miners has been strictly enforced, and that the mining industry in the Territory is in an exceedingly prosperous condition. Coal mine owners and operators have done everything within their power to provide for the safety of their employees and to maintain proper sanitary conditions in the mines. The production of coal during the year aggregated 1,187,334 tons, valued at $1,606,174, an increase of 30,196 tons over the output of the previous year. Scarcity of miners in connection with the protracted strike at Gallup, N. Mex., resulted in the closing down of several large mines, restricting the mining of coal in the Territory materially. Had this strike not interfered the increase in production, it is stated, would have been at least 205,196 tons. This conclusion is reached from the fact that there was abnormal demand for coal by the transportation companies and the coal was already developed in the mines and ready for abstraction, the only factor lacking to insure the increase of production being the labor necessary to mine the coal. During the year 1,523 men and boys were employed in the mines, a decrease in number of employees of 145 in the last year. This decrease in number of employees was due solely to the scarcity of miners and not to lack of employment. Nearly all the more important operators, the inspector states, have agents in these coal-mining sections of the United States and the British possessions seeking to employ miners and pay their fare and expenses to New Mexico.

Twenty accidents were reported, 9 of which were fatal, or 1 life per 135,281 tons of coal mined.

Forty-two thousand seven hundred and thirty-three tons of coke were produced from coals mined in the Territory, which sold at an estimated value of $2.50 per ton at the ovens.

Coke production is largely on the increase, 100 coke ovens now being in process of construction at Dawson, and several others at different points in the Territory will be constructed in the near future.

McKinley County leads in the production of coal, it having produced during the year 531,215 tons, of a value of $677,856, against 503,150 tons last year. One thousand and forty-seven men are employed. Colfax County is second, with 332,046 tons, valued at $334,196, produced, against 394,108 last year, and 275 men employed. Lincoln County is third, with 228 men employed, 172,782 tons produced, against 88,060 last year, the value of the product this year being $332,264. Santa Fe County is fourth, with 185 men employed and 115,346 tons of coal, worth $200,740, produced, against 191,139 tons the year previous.

Rio Arriba County produced 51,600 tons, valued at $69,200, against 35,706 tons the year previous; 66 men employed.

Socorro County produced 14,116 tons, valued at $27,027, against 6,000 tons the year previous; 64 men employed.

San Juan County produced 425 tons, valued at $531, against 500 tons the year previous; 5 men employed.

During the year nine new mines were opened or old mines reopened, six in Colfax County, one in Santa Fe, one in McKinley, and one in Socorro County. Three mines were abandoned—two at Blossburg, in Colfax County, and one at Capitan, Lincoln County.

The mine inspector recommends that the law be amended, making the miner as well as the mine owner responsible for dereliction of duty whereby the safety of fellow-workmen or his own may be imperiled.

NATIONAL PARKS AND RESERVATIONS.

Yellowstone National Park.

The Yellowstone National Park, set aside by act of March 1, 1872 (17 Stat., 32), is located in the States of Montana and Wyoming, and has an area of 2,142,720 acres. The average altitude is about 8,000 feet.

Capt. John Pitcher, First Cavalry, U. S. A., acting superintendent, reports that he assumed command of the troops in the park and entered upon the duties of acting superintendent May 8, 1901, relieving Capt. George W. Goode, First Cavalry.

The acting superintendent states that he found but one troop of cavalry stationed in the park, and later, on account of the unusually dry season and the large number of camping parties in the park, it was necessary to increase the number. Capt. E. Lindsey was accordingly sent by the Adjutant-General to report for duty, and arrived at Fort Yellowstone, with his troop, August 3. They were at once sent to a camp in Lower Geyser Basin, where they did much hard work and rendered valuable service in extinguishing some large fires.

The very dry season developed the fact that the water supply was entirely too small, and inconvenience was experienced by both tourists and all living at the Mammoth Hot Springs. To remedy this a new reservoir, with a capacity of 2,000,000 gallons of water, has been built and connected with the existing water system. The supply of water is ample for the post of Fort Yellowstone, Mammoth Hot Springs Hotel, and also permits of irrigation for beautifying the plateau upon which the post and hotel are located. Capt. Hiram M. Chittenden, United States Corps of Engineers, made the necessary surveys, prepared the plans, and supervised the work of construction; the funds and material being furnished by the Quartermaster's Department.

There were three large fires during the season. The first, in Gibbon Canyon, was started by a camper traveling through the park who, becoming frightened by a bear, built three large fires about his camp. The patrol compelled him to extinguish them during the night, and he was cautioned as to the danger of forest fires, but he rebuilt the fires after the patrol left and failed to entirely extinguish them. As a result, the fires started up again and developed into a serious conflagration, causing one day's delay in travel on that part of the road. The camper was arrested, brought to Fort Yellowstone, fined $50 and costs by the United States commissioner, and, being unable to pay his fine, served out his sentence in the post guardhouse.

The origin of the second fire is unknown. It was probably caused by some tourist or fisherman lighting a pipe or cigar and carelessly throwing away a lighted match. This fire kept a troop at work nearly a month. The third fire was caused by lightning and did but little damage, as it was soon extinguished by a heavy rain. These fires commenced before the arrival of Captain Lindsey's troop. With more men to patrol the roads they might have been prevented entirely.

There is scarcely any feature in the park which tourists enjoy more than the trout fishing, which is now to be had in almost any stream in the park. Five different species of trout can be taken within the limits of the park; these are the native or black-spotted trout, the rainbow, the Von Behr, the Loch Leven, and the Eastern brook trout.

On this subject the acting superintendent says:

There is no restriction placed on the fishing in the park save that fish can not be caught and sold for the market, and in order that it may never be necessary to make any restrictions it is strongly urged that a small fish hatchery be established here. If this can be done the streams can be kept so full of trout that it will be impossible for the tourists to deplete them. Mr. D. C. Booth, who is in charge of the United States hatchery at Spearfish, S. Dak., visited the park this summer, and has reported a favorable location for a hatchery on Willow Creek, about 8 miles from the Mammoth Hot Springs. Mr. Booth collected about 1,000,000 eggs from the Yellowstone Lake trout and sent them to the hatchery at Spearfish. He brought into the park and placed in Willow Creek about 10,000 Eastern brook trout, and has just informed me that he now has about the same number of rainbow trout, which can be had on application to the United States Fish Commissioner. Application for them has just been submitted, and as soon as received they will be planted in the Gibbon River.

Prof. Willis L. Moore, Chief of the Weather Bureau, while visiting the park, expressed a desire to establish a weather station in the park. It is believed that such a station would be of advantage to the park as well as to the Weather Bureau. The publication of the temperature during the summer would call attention to the desirability of the park as a summer resort.

About 50 miles of the boundary on the eastern side of the park still remains unsurveyed. It has been estimated by Mr. Edward F. Stahle, who completed the surveys of the north, south, and west boundaries this year, that the unsurveyed portion could be measured and marked for $3,000, or at the rate of $60 per mile. The acting superintendent strongly urges that this survey be authorized.

The large game in the park, with the exception of the buffalo, seems to be more numerous than ever; at least, more has been seen. This is believed to be due to the regulation concerning dogs being more strictly enforced the present season. While one small dog would not harm large game, it would drive it back from the roads so none could be seen by the average tourist. As this is one of the most interesting features to visitors, it is desirable they should have an opportunity to see it. Only one case of poaching was reported, where a man was charged with trapping two beavers near Soda Butte. It is thought that there are about 25 buffalo in the park. The elk are numerous, but it is possible that they will be reduced to the number that can live entirely in the park unless something is done to protect them on their winter range—Teton Forest Reserve.

The deer in the park are quite numerous and very tame.

The antelope would undoubtedly have become extinct in the park in a short time but for the fact that Montana has this year passed a law which absolutely prohibits the killing of these beautiful animals, for an indefinite period. This will give them a chance, and they will probably increase very rapidly in the future.

The bear have increased greatly in numbers, and during the past season they have been a source of great amusement and interest to the tourists, at both the Fountain and the Canyon hotels anywhere from fifteen to twenty bear—grizzly, black, and brown—could be seen about the garbage piles every evening. They could also be seen in greater or less numbers at any of the other hotels or lunch stations.

Of the smaller game the beaver have probably increased more rapidly than anything else, and their dams and houses are now to be found in almost all of the smaller streams in the park.

Fort Yellowstone is one of the most neatly built and attractive-looking little posts in the country, but too small for the needs of the park. The acting superintendent recommends that the post be enlarged to a four-troop or squadron post; that a suitable house be constructed for the use of the commanding officer and acting superintendent of the

park, in order that he may properly entertain the many distinguished visitors who come into the park with letters of introduction to him from all parts of the country; also that the post be lighted by electricity instead of by oil, as a matter of safety and convenience. A suitable location for an electric plant can be found within 300 yards of the post, which plant could be run by water power and therefore at a very reasonable cost.

The service provided by the Yellowstone Lake Boat Company has apparently been entirely satisfactory to tourists, but there have been many verbal complaints concerning the excessive charges for the hire of small boats, fishing tackle, etc., by this company. Only one written complaint was received; the others who complained declined to put their statements in writing on the ground that they did not wish to be bothered further about the matter, yet they wished it corrected. The Lake Hotel has been a very popular place on account of the delightfully cool weather always to be found there and the fine fishing in the lake. The acting superintendent recommends, in order to remedy the complaints about the boat question, etc., that some competition be introduced, and suggests that a few naphtha launches would add greatly to the attractions of the lake.

The Yellowstone National Park Transportation Company is the best equipped transportation company in the park. Their teams are excellent and drivers skillful, as shown by the remarkable freedom from accidents during the past season. The company and the Yellowstone Park Association, or hotel company, operated in perfect harmony. The Monida and Yellowstone Stage Company is also well equipped with fine Concord coaches and surreys and has given entire satisfaction to its patrons. Their business shows an increase each year. This company also operated in harmony with the hotel company.

The Yellowstone Park Association has done much to improve its hotels throughout the park. The Mammoth Hotel has been newly painted, a porch added, and the interior fitted up with modern conveniences, bath rooms, porcelain-lined tubs, electric lighting, steam heating, etc. A new and comfortable little hotel has been constructed at Norris Geyser Basin. Fountain Hotel is comfortable and quite modern, having steam and electricity, and is supplied with water from a large hot spring—soft and delightful water for bathing. The association is preparing to build a new hotel at Upper Geyser Basin, where a frame building and tents have afforded acceptable accommodations. The Lake and Canyon hotels have also been improved in appearance and comfort.

The management of the permanent camps by Mr. W. W. Wylie has been satisfactory, except that some of his agents have misrepresented the routes traveled by other transportation companies.

The acting superintendent embodies in his report a letter from Captain Chittenden, United States Engineers, in charge of improvements in the park, containing recommendations as to estimates for next season's work, as follows:

1. Sprinkling.—The experiments conducted during the past season of sprinkling a certain stretch of carefully built road has demonstrated the great value of extending this work over the main roads of about 150 miles. It will require one sprinkler and seven filling tanks to every 5 miles. This will cost at the least calculation the sum of $30,000 and should be included in the estimates for permanent plant, which ought to be procured within the next three years.

2. Buildings.—For the use of your troops in patrolling the park, for the use of the Engineer Department when sending parties over the road system, and for the use of the officers of the Government when traveling on duty through the park, the present station houses should be enlarged and improved and certain additional ones should be built. The total number will be 12, and possibly 13, and will cost on the average, if properly built, $2,000 each, including outhouses, and taking into consideration the great distance to which much of the material will have to be hauled. There should be provided for this purpose the sum of $25,000.

3. Work at Mammoth Hot Springs.—The completion of the new water supply for Fort Yellowstone and the bringing of the waters of Glen Creek to this point have made possible the irrigation of the Mammoth Hot Springs plateau and the conversion of this dusty tract of ground, where the main business of the park is conducted, into permanent turf. This improvement is very urgently needed. To complete it as it should be, and at the same time realign and thoroughly rebuild the roads of the plateau, with proper sidewalk, will cost about $15,000.

The total estimate for these three purposes is therefore $70,000.

The acting superintendent urges that the appropriations asked by Captain Chittenden be secured if possible, and, among other things regarding his work, says:

The experiment in road sprinkling has been a decided success, and has added much to the comfort of tourists and kept that portion of the roads which were sprinkled in fine condition, for, in addition to keeping down the dust, the broad tires of sprinkling wagons acted as rollers and kept the roads perfectly smooth and free from ruts.

The work accomplished during the season in the way of improvements is as follows:

New road opened in valley of Gardiner, replacing dangerous road under cliff; includes three steel bridges.

About 1,600 feet of new road built on hill below Mammoth Hot Springs, replacing a 15 per cent grade with one of 8 per cent.

A single-track surrey road opened from Glen Creek to Middle Gardiner Falls, 2 miles.

One-fourth mile of very difficult construction in upper end of Golden Gate Canyon.

Entire length of road from Mammoth Hot Springs to Golden Gate resurfaced.

Same stretch of road sprinkled throughout the season.

Water supply for Mammoth Hot Springs put in, including the construction of a ditch to carry the water of Glen Creek to Mammoth Hot Springs, the construction of a reservoir holding 1,800,000 gallons, and the laying of a pipe line to connect with the points where supply is to be used.

The construction of about 7 miles of road near Yancey's, the grading of bridge approaches over the Yellowstone, and the survey of the proposed line as far as Tower

Falls and through Granite Canyon on the road to Cooke City. The erection of the Yellowstone bridge has been prevented by failure of the mills to furnish the material, owing to the steel strike.

The construction of 9 miles of road between the Thumb and Lake Hotel to cut out the Lake Shore road.

Construction of 12 miles of road on the eastern approach, carrying that road into the valley of Middle Creek, beyond Sylvan Pass. This work includes the construction of new pile bridges over Yellowstone River and Pelican Creek.

The opening of 6 miles of road near Jackson Lakes and the extensive reconstruction of the southern approach, including new bridges over Lewis River and Crawfish Creek, placing this road in very fair condition from Yellowstone Lake to Buffalo Fork of Snake River, the western terminus of the Fort Washakie military road.

The annual repairs have been extensive and have covered the entire existing system. The roads were all open by the 1st of June, something never before accomplished since the main circuit of the roads was opened. Extensive resurfacing has been done near Norris, in the Lower Geyser Basin, and on the Continental Divide road. About 200,000 feet of lumber has been manufactured, both for new work and the repairs of old bridges. The station houses throughout the park have been placed in repair, temporarily.

Eight cases of violation of the act of Congress providing for the protection of birds and animals in the park were tried before the United States commissioner; seven of the defendants were fined and one was not found within the jurisdiction of the commissioner. Three cases of larceny were brought before him; two of the defendants were held to the district court; in the other case the defendants were not apprehended. In a case of assault the defendant was fined.

The total number of visitors to the park during the season was 10,769. The aggregate number carried over the regular route by the Yellowstone National Park Transportation Company was 3,468; by the Monida and Yellowstone Stage Company, 509; the aggregate number traveling with licensed transportation, 2,186; aggregate number carried by private transportation, 4,112.

During the season 3,378 tourists took the trip across Yellowstone Lake with the Yellowstone Lake Boat Company. Of this number 1,702 entered the park with the Yellowstone National Park Transportation Company, 141 with the Monida and Yellowstone Stage Company, 1,370 with W. W. Wylie, and the balance, 165 people, were other campers.

In my last annual report I adverted to the necessity of extending the boundaries of the Yellowstone National Park to include the Yellowstone and the Teton forest reserves, etc., east and south of the park to afford better protection for the large game, particularly the buffalo and the elk, during the winter season. Congress, however, took no action in the matter, and I therefore deem it advisable to again direct attention to this important subject and to urge that the necessary legislation be enacted at an early day. The steps heretofore taken, with a view to securing legislative action, are fully set forth in

the reports of the Secretary of the Interior for the years 1898, 1899, and 1900, respectively, wherein it is stated, among other things, that—

Under date of February 1, 1898, there was transmitted to Congress a report made on the 12th of January, 1898, by Col. S. B. M. Young, Third United States Cavalry, then acting superintendent of the park, recommending the extension of the limits of the park, and submitting a draft of a bill with a view to carrying the same into effect.

The boundaries as suggested in said bill, which are indicated on a map accompanying the same, would extend the limits of the park so as to embrace the Yellowstone Timber Land Reserve, which lies on the east and south boundaries of the park, and comprises about 1,914 square miles; all that portion of the Teton Forest Reserve lying east of the summit of the Teton Range and comprising about 1,050 square miles, and adjoining the Yellowstone Timber Land Reserve on the south, together with an unreserved area of about 30 square miles at the southwest corner of the park, in Idaho, and an unreserved area of about 260 square miles at the northwest corner, in Montana.

In the forest reserves are fine bodies of timber which it is important should be preserved from fires because of its value as timber, as well as the protection to watersheds and against fires running into the park.

It is reported that during the winter months the large game from the National Park herd roam to a very considerable extent in the areas proposed to be included within the park, and they should have all protection possible from destruction by marauders, who are constantly on the watch for game as it roams out of the park limits. The State game laws are applicable to the forest reserves, and for this reason it is impracticable to prevent the killing of game in the reserves in the same manner and to the same extent as it is prohibited in the park. The superior discipline of regular troops makes a more effective patrol than the civil forest officers, and cavalry can cover a greater extent of territory with more expedition, and is better able to cope with trespassers than are forest rangers.

In view of the importance of protecting this country, which has an international reputation on account of its scenic beauties, and to throw additional safeguards about the big game whose natural home is the National Park, and to protect more effectually the timber embraced in the forest reserves adjoining the park, I think it a wise policy that the additional areas herein described be embraced in and placed under the laws and management relating to the Yellowstone National Park.

APPROPRIATIONS.—Congress at its last session, pursuant to a recommendation from this Department, transferred from the War Department to the Secretary of the Interior the supervision of the expenditure of appropriations for protection in this reservation and appropriated the sum of $5,000 therefor for the current fiscal year, the appropriation for improvements in the park remaining, as heretofore, under the War Department.

From time to time leases of ground for hotel and other purposes have been made, transportation and other privileges for the accommodation of the traveling public in the park have been granted, and the revenues derived therefrom have been covered into the Treasury to be applied to the purposes specified in the act of Congress approved March 1, 1872 (17 Stat., 632), now sections 2474 and 2475, Revised Statutes United States, setting apart the lands therein described, near the headwaters of the Yellowstone River, as a public park or pleasur-

ing ground for the benefit and enjoyment of the people, and placing it under the exclusive control of the Secretary of the Interior.

It is desirable that this fund be available for use in case of the exhaustion of the specific appropriation for the protection of park or any other purpose necessary in the management of the reservation. There is a doubt, however, as to whether under existing law this can be done, as the Comptroller has held it to be a well-settled rule of construction of the accounting officers that where an appropriation is made for a specific object that appropriation is exclusive, although there may be another appropriation which, but for the special appropriation, would have been available, and that the fact that the specific appropriation is inadequate or has become exhausted does not make the other appropriation available. (1 Comp. Dec., 126, 236, 417; 3 id., 353.) To the end, therefore, that there may be no question as to the authority of the Secretary to expend the park revenues for proper administrative and protective purposes in the reservation, I have to recommend that the following paragraph be incorporated in the sundry civil bill when it shall receive consideration by Congress, to wit:

For the administration and protection of the Yellowstone National Park, to be expended under the direction of the Secretary of the Interior, who is authorized in his discretion to use the moneys derived from leases and other privileges in the reservation for the improvement, administration, and protection thereof, $15,320.

Yosemite National Park.

This park is situated in Tuolumne, Mariposa, and Mono counties, Cal., and covers an area of about 1,512 square miles, being 36 miles wide and about 42 miles long. The lands embraced therein were set aside by act of Congress approved October 1, 1890 (26 Stat., 650), and were placed under the supervision of the Secretary of the Interior.

By the act of Congress approved June 6, 1900 (31 Stat., 618), the Secretary of War was authorized and directed, upon the request of the Secretary of the Interior, to detail troops for the protection of the national parks in California. Pursuant to the requirements of the statute, Maj. L. A. Craig, Fifteenth Cavalry, U. S. A., was detailed for duty in the reservation as acting superintendent. He reports that he entered upon the discharge of his duties June 17, having under his command, for the purpose of patroling, guarding, and enforcing the regulations of the park, Troop H of the Fifteenth Cavalry. The main camp, as in previous years, was established at Wawona.

During the season patrols have been kept constantly moving in different parts of the reservation, looking for trespassers and hunters. Only one drove of cattle was found trespassing on the reservation, which was driven off, and one large herd of sheep with four herders in charge. The sheep were driven beyond the park limits, and the herders ejected from the park.

Guards have been kept at the principal entrances of the park at all times, thereby preventing anyone, excepting those coming in over trails, from bringing in firearms.

There have been several fires in the park during the season, caused in almost every instance by the carelessness of campers, but, owing to the vigilance of the troops, they were extinguished with but little or no damage.

Game, principally deer, quail, and grouse, is very plentiful, and, though a large number of firearms have been taken up from persons in the reservation and returned to the owners on leaving, not a single instance was reported where tourists or campers disregarded the regulations as to hunting.

There were 9,000 visitors in the park during the season, being 4,000 more than last year. About two-thirds of the visitors this season were campers.

The regulations now in force in the park were prescribed in 1890 at the time the reservation was set aside and do not cover conditions as they now exist in the reservation. New ones should be promulgated, containing very stringent provisions regarding campers. The latter have become somewhat troublesome, and good evidence has been found that this class of visitors have used dynamite or similar high explosives to kill trout. Furthermore, it appears that every fire that has occurred during the past summer within the park or outside of its limits (some of which were very dangerous) was caused by the indifference, carelessness, and no doubt in some instances by the criminal acts of the campers.

There are in the park $53{,}931\frac{15}{100}$ acres of patented lands and three claims, embracing $327\frac{975}{1000}$ acres, on which patents have not yet issued. The Department has always recognized the rights of owners, transferees, or lessees of such lands to use the same for all lawful purposes, and there has been practically no interference in the use and enjoyment of such property, except in cases where it was desired to graze sheep or cattle thereon or cut and remove timber therefrom. In such cases the metes and bounds of the lands have uniformly been required to be marked and defined so as to enable the officer intrusted with the duty of protecting the reservation to determine whether the lands from which timber is cut, or on which stock is to be grazed, were within the limits of the patented lands or on the park lands. It is also required that in removing timber from the reservation, or in taking animals to and from patented lands, that it should be done under the supervision of such officers and over the roads and trails of the park. While no trouble has been had during the past year with owners of this class of lands, and they have shown a disposition to conform to the rules and regulations, yet, judging from past experience in the management of the park, friction is liable to arise at any time. For administrative

purposes it would be better if private holdings were eliminated from the park, and to that end Congress should authorize the purchase of these lands or extend to the national parks in California so much of the act of Congress approved June 4, 1897 (30 Stat., 36), as permits the relinquishment by owners of tracts of land in the several forest reservations and the selection in lieu thereof of vacant lands in other localities which are open to settlement.

The report calls attention to a petition of owners of patented lands for permission to use the park lands, in which it is stated, among other things, that—

> It is well known that during the many years prior to the establishing of the park, fires were less frequent than at the present time. * * * The cattle and horses ate down, to a considerable extent, the grass and underbrush, thus leaving no great quantity of substance for fire, while without their presence this undergrowth is so rank * * * that it becomes impossible to check the fire when once under headway. This is well established, as the fire within the park in 1899 burned for over two months and destroyed thousands of acres of timber and forest growth, and no parallel instance has been known in all the years the mountains were occupied before the park was established. The undergrowth is now becoming so thick that in the spring season, as the sap therein begins to rise in the trees or shrubs, it creates a heat that melts the snow earlier than where there is no timber, consequently the more dense the timber and undergrowth is, the less beneficial is it in conserving the snow; and it may also be noted that game is becoming scarcer in the park each year, which fact may be attributed to the lack of sustenance for the wild animals therein, thereby resulting in the destruction of birds' eggs and young deer, while heretofore death among horses and cattle contributed largely toward the foods of the forest animals.
>
> If cattle and horses were permitted to be grazed within the park under such conditions and restrictions as are placed upon persons who graze their stock within the forest reserve, the park and its natural conditions would be better preserved.

The superintendent, after due consideration of this petition, based upon the best evidence which, he states, he has been able to obtain, recommends that owners of private lands in the park be allowed to graze cattle, under certain restrictions, on lands near their own premises, under the supervision of the park authorities; that permits for this privilege be granted by the superintendent, subject to immediate cancellation where any violation occurs.

By act of Congress approved February 15, 1901 (31 Stat., 790), the Secretary of the Interior is authorized and empowered to grant rights of way in the park for telephone and telegraph purposes and for water conduits, reservoirs for irrigation, mining or quarrying, manufacturing, and other purposes. No grants, however, have been made as yet under this act.

By act of Congress approved March 3, 1901 (31 Stat., 1162), $4,000 was appropriated for the construction of bridges, fencing, and trails, and improvement of roads, other than toll roads, to be expended under the supervision of the Secretary of the Interior.

Pursuant to such authority, contract was entered into for the construction of a bridge across Wet Gulch, on the trail leading from Suspension Bridge over Merced River to the Coulterville road, and the construction of a trail from each end of said bridge to connect with trail previously constructed, for the sum of $1,000. This work, the superintendent reports, is progressing rapidly, and will probably be finished before the troops leave the reservation.

Contracts for other work in the park were entered into as follows: For the repair of a trail from the head of Hetch Hetchy Valley to Til Till Valley, a distance of 5 miles, for the sum of $650; for the construction of a bridge at the head of Hetch Hetchy Valley, over the Tuolumne River, for $800; for the repair of the road and construction of a small bridge thereon from Hodgsons ranch to the South Fork of the Tuolumne River, about 1½ miles, for $125; for the repair of the trail leading into the Poopino Valley from Hetch Hetchy Valley trail, 4 miles, for $350; for the construction of a bridge, with side railing, over Rancheria Creek, near Hetch Hetchy Valley, for $450, and for repairing the trail from Camp A. E. Wood to Alder Creek, a distance of 5 miles, for $240.

The superintendent recommends that the following trails and roads be repaired during the next fiscal year, to wit:

Trail from head of Chilnualna Falls to Devils Post Pile, a distance of about 38 miles, to cost about $1,500; for construction of trail from Clouds Rest trail to Lake Merced, a distance of about 5 miles, to cost about $500; repair of trail from Til Till trail east side of Rancheria Creek to The Sink, a distance of about 10 miles, to cost about $1,000; repair of trail from Poopino Valley to Lake Eleanor, a distance of about 9 miles, to cost about $1,000; repair of trail from headwaters of San Joaquin River to head of Bloody Canyon, a distance of about 30 miles, to cost about $2,500; repair of trail from Lake Tenya to White Cascades on Tuolumne River, a distance of about 9 miles, to cost about $700; repair of trail from Lake Eleanor to Lake Vernon, a distance of about 11 miles, to cost about $650; repair of trail from Lake Vernon to Til Till Valley, a distance of about 8 miles, to cost about $600; for the construction of a bridge over Tuolumne River near Lambert Soda Springs, to cost about $1,000, and to be constructed in such a way that the floor can be removed in the winter months to prevent being broken down by snow—it is not necessary for this bridge to be over 5 feet in width, as it can only be used by saddle and pack animals; for construction of a trail from Lake Ostrander to Crescent Lake, a distance of about 7 miles, to cost about $900.

Sequoia and General Grant National Parks.

Sequoia Park is located in Tulare County, Cal., and has an area of about 250 square miles. It was set aside by act of Congress approved September 25, 1890 (26 Stat., 478), and placed under the control of the Secretary of the Interior.

By act of Congress approved June 6, 1900 (31 Stat., 618), the Secretary of War was authorized and directed, upon the request of the Secretary of the Interior, to detail troops for the protection of these parks.

Pursuant to the provisions of this act L. C. Andrews, captain and quartermaster, Fifteenth Cavalry, U. S. A., was detailed for duty in charge of the reservation as acting superintendent, and reports that he arrived with Troop I and went into camp at Kaweah, on the Hopping Range, on June 19, 1901. Reconnoissances of trails and detachment camp sites were made as rapidly as possible, and one detail sent to open up the South Fork trail to Hocketts Meadows. The main camp was made on the bluff overlooking Old Colony Mill and the canyons of the Kaweah and East Branch of the North Fork, in order to be near to the work on the Giant Forest road. Detachments were established in various parts of the park, and by diligent patrolling have been able to keep it under close observation. As soon as a road is opened to the Giant Forest a permanent camp site should be selected and suitable buildings erected for the accommodation of the troops, and also at the supply camp at Kaweah.

The first point of interest in the park is the Giant Forest of Sequoias, and to make this accessible a fine mountain road is now in process of construction; when completed it will connect with the country road from Visalia, Cal. The survey for the further extension of the road into the forest is progressing rapidly and through a picturesque country; its direction is such as to admit of its extension to Kings River Canyon in case Congress sees fit to include that in the park.

At the beginning of the season the Old Colony Mill road, made impassable by the winter storms, was repaired and extended a distance of a little over 2 miles at an expense of $600. This new road was constructed at less cost per mile than was required in the repairing of last year's road, as here the work could be largely done by teams instead of hand. A substantial bridge constructed on this road is an attractive feature thereof. The best of timbers have been used, the foundations are solid native rock, and the workmanship good.

The early opening of the Giant Forest road is an important consideration to the traveling public. The acting superintendent suggests the placing of the work in the hands of one man, thoroughly familiar with the conditions of mountain-road building, ready to organize his working force by May 1. A great saving in time and money can be effected by working the ground when moist, before the long dry season has made it hard and unworkable. Necessarily, the first work to be done during May is the repairing and widening of Old Colony Mill road, as it is very narrow, often causing an hour's delay, hard work, and no little danger when teams meet, and parts of it are in a dangerous condition. In order that the road may be put in proper condition and extended, the whole extension being about 6 miles long, an appropriation of $20,000 will be required, which Congress should make immediately available.

The addition of another forest ranger for duty in the park has facilitated the work of constructing new trails therein and straightening the old ones. The first trail constructed during the season was from the end of the new road across the ford in the Marble Fork and to Round Meadow in Giant Forest. This made the forest accessible for saddle and pack animals, and several tourists have taken advantage of it during the past season. Acting upon the proposition of the acting superintendent, the Visalia Board of Trade extended the trail beyond the Giant Forest, past the General Sherman tree to the north line of the park into Kings River Canyon. Another important trail has been put in from the forest to Alta Meadow and Panoramic Point, and passing within a few hundred feet of the top of Panther Peak, a lookout of no mean value.

Personal inspection has been made of the Clough and Palmer caves, both being located in the limestone belt that traverses the park.

The Clough Cave is in the rocky side of the canyon of the South Fork, five hours from Kaweah post-office. A good trail will be opened to it by the beginning of next season. In formation it is but a tunnel, varying in width and in height from 3 to 12 and 15 feet. The first 100 feet are perpendicular to the face of the cliff, the floor practically level. It then turns to the left and parallels the face for about 400 feet, the last 150 feet being on a plane some 8 feet higher and ending in a circular loop 100 feet in circumference. This has been a beautiful cave for stalactites, stalagmites, and pillars, but these have been broken by the hundred, while all are blackened by the smoke of the pine torches used in its exploration. It could be protected from further depredation by constructing an iron grating and gate at its entrance; the acting superintendent, however, regards the beauty of the cave as too much impaired to justify the expenditure of any large sum of money for its proper protection.

The Palmer Cave is situated high in the mountain range to the northeast of the Clough, and about six hours from Kaweah, on the old Hockett trail. This is quite different in formation, being a large cavern in the ground, with an irregular opening in the roof about 10 by 20 feet. Through this it is necessary to be lowered by rope tackle, a drop of 60 feet, into the end of a vaulted cavern about 150 feet long, the floor sloping rapidly down away from the entrance, the roof perhaps 50 feet high at its highest, the sides very irregular, due to caving off of large rock masses, the greatest width being about 50 feet; thence through a low opening one climbs into another large cavern generally circular in shape, 100 feet in diameter and about 30 feet high, in which are beautiful stalactites and stalagmites and one noticeably beautiful pillar, and beyond is another room, long and narrow. The beauties of this cave are unimpaired and the specimens quite perfect, and are

worthy of preservation. As other caves are being heard of, a thorough investigation of the matter should be had next season.

The acting superintendent recommends that each of the small mountain meadows on main trails in the park be fenced for the accommodation of tourists, whose stock must depend on grazing for feed. This could be done at little expense by using in the construction thereof the down timber, which must be cleared up in any event to lessen the danger from fires. The county road along the North Fork, connecting with the Giant Forest road, is now obstructed by gates at farm lines, but an arrangement has been made with the road commissioner at Visalia to have these gates removed and the road fenced during the winter, also to repair the county roadbed. The park line should be fenced where it crosses the South Fork Canyon with a gate on the trail; a mile and a half will close this entrance to stock and remove the present temptation of the many acres of fine pasturage on Bald Mountain.

The deer in the park are increasing in number and apparently becoming more tame in the absence of hunting; black and brown bear are also numerous, while grouse and mountain quail are very plentiful and tame. Many streams are already stocked with trout, and tourists can always get fresh trout to eat, caught in a few moments.

The sheep have gone out of the country, and that annoyance seems to be past. The stockmen have nowhere attempted to enter the park unlawfully, and now that it is believed that the people of the State and Congress are interested in developing the park, it seems to be the spirit of the community to observe park regulations.

During the season five forest fires have been controlled and extinguished, two in the Giant Forest itself. The acting superintendent recommends that stockmen be allowed to graze their herds in the park, unless it be found that this lessens the storage capacity of the mountains for the summer supply of water for irrigation, as such a course, if pursued, will result in the present accumulation of fine grasses, ferns, and underbrush being eaten by the cattle, thus lessening the danger from fires.

The acting superintendent expresses the opinion that an official investigation of private holdings within the park, of which there are several even within the Giant Forest, will disclose the fact that some of these claims, under a strict reading of the law, especially some classed as "swamp and overflowed land," are not valid. No private claims, he states, should be allowed if it really be intended to make a national park of this tract of land, and action should be taken to absorb them in the public ownership.

In this park there are $972\frac{87}{100}$ acres of patented lands and one claim of 40 acres on which patent has not yet issued, and in the General Grant National Park there are 160 acres of patented lands. The atten-

tion of Congress has been repeatedly called to the advisability of the acquirement by the Government of the title of all private lands within this and the other national parks in California, but without effect. The extinguishment of the title to all private holdings within these reservations, either through purchase by the Government or the extension to the parks the provisions of the act of June 4, 1897 (30 Stat., 36), so as to permit the relinquishment by owners of patented lands therein, and the selection in lieu thereof of vacant lands in other localities which are open to settlement, would result in better administration.

The acting superintendent recommends that steps be taken to construct a telephone line in the park, as it is almost a necessity that the main camp of troops up in the mountains be connected by wire to the line at the camp at Three Rivers, and it would also be of great value to the road work and to business men who may wish to visit the park.

General Grant Park.—This park is situated in Mariposa County, Cal., and is but 2 miles square, its one attraction being the two groves of sequoias, one of which contains the very large tree called the General Grant. During the season $2,500 have been expended in improvements, the park has been completely fenced, and the "Stevens grade" was sufficiently repaired to admit the getting of teams into the park, but is still a poor and dangerous road. It could be replaced by 2 miles of good grade at a cost of $4,000, and this is recommended.

Within the park a good road has been constructed from the entrance, 2½ miles, through the first and to the second sequoia grove, passing close to the General Grant tree and lacking but a half mile of connecting with the Converse Basin road. This can be completed for $300.

One thousand dollars has already been expended on cleaning up the rubbish and down timber in the sequoia grove, thus protecting the trees from fire and adding to the appearance of the park, and a similar amount should be allotted for this work next season.

The acting superintendent strongly recommends that one man be employed as a permanent guard in this park, as during the absence of the troops it is unprotected for eight months of the year; souvenir hunters have left traces of their presence during that period, as a great many pieces of bark have been cut from the General Grant tree; this is injurious to the tree and if continued will kill it in a few years. Such a guard will not only protect the park, but keep the fence and road in repair.

It is estimated that the following sums will be required for the management and protection of these reservations during the next fiscal year, to wit: Sequoia Park, $25,000; General Grant Park, $3,000.

Appended to the report of the acting superintendent is a copy of his instructions to the park rangers.

Mount Ranier National Park.

By the act of Congress approved March 2, 1899 (30 Stat., 993), a portion of certain lands in the State of Washington, known as the Pacific Forest Reserve, was set aside as a public park, to be known as the Mount Ranier National Park.

Section 2 of this act provides, inter alia:

> That said public park shall be under the exclusive control of the Secretary of the Interior, whose duty it shall be to make and publish, as soon as practicable, such rules and regulations as he may deem necessary or proper for the care and management of the same. Such regulations shall provide for the preservation from injury or spoliation of all timber, mineral deposits, natural curiosities, or wonders within said park, and their retention in their natural condition. He shall provide against the wanton destruction of the fish and game found within said park, and against their capture or destruction for the purposes of merchandise or profit. He shall also cause all persons trespassing upon the same, after the passage of this act, to be removed therefrom, and generally shall be authorized to take all such measures as shall be necessary to fully carry out the objects and purposes of this act.

Section 5 provides:

> That the mineral land laws of the United States are hereby extended to the lands lying within the said reservation and said park.

No regulations for the government of the park and "for the preservation from injury or spoliation of all timber, mineral deposits, natural curiosities, or wonders within said park and their retention in their natural condition," as required by the act, have been promulgated by the Department, for the reason that it would not be practicable to prescribe suitable regulations, the enforcement of which would not prevent or interfere with the exploration, development, location, occupation, and purchase, under the mineral-land laws, of any mineral lands lying within said reserve.

In previous annual reports, in discussing the status of this national park, attention was directed to the desirability of repealing section 5 of the act of March 2, 1899 (30 Stat., 993), and for the providing of a penalty for violation of any regulations prescribed for the government of the park, as well as the making of appropriations for the protection of the reservation. Several applications have been presented to the Department for transportation and other privileges for the accommodation of the traveling public in this park, but the consideration thereof has necessarily been declined, owing to the fact that no regulations for the government of the park had been promulgated.

In renewing my recommendations in this matter I desire most earnestly to urge early Congressional action thereon.

Hot Springs Reservation.

The report of the superintendent of the Hot Springs Reservation shows that the Hot Springs of Arkansas continues to add to its reputation as a health resort, and each succeeding year adds to its renown. The patronage accorded to this great national sanitarium during the fiscal year 1901 exceeds all previous records, which he considers a most flattering testimonial to its worth. The number of visitors during the year is stated to be 55,000, and the total number of baths given 673,921.

The wisdom of the retention, control, and supervision of these wonderful waters under the fostering care of the National Government has been fully demonstrated since the Government took charge in 1878. The springs are now the property of all the people, free from monopoly and extortion and within the reach of all.

The Hot Springs Reservation at present contains 911.63 acres. The original reservation was established by act of Congress approved April 20, 1832, and contained 2,529.10 acres. By the act of March 3, 1877 (19 Stat., 376), the appointment of commissioners was authorized to lay out into squares, blocks, lots, avenues, and streets certain tracts of land in the county of Garland, State of Arkansas, known as the Hot Springs Reservation; the appointment of a superintendent thereof by the Secretary of the Interior, and the levying of a tax on water taken from the springs authorized to be used in improvement of the reservation. With the exception of 157 lots, all of the lands except the 911.63 acres have been disposed of by the Government, and the districts known as North Mountain, West Mountain, Sugar Loaf Mountain, together with Hot Springs Mountain, were forever reserved from sale and dedicated to public use as parks by act of Congress approved June 16, 1880. (21 Stat., 288.)

The total number of hot springs is 46, and the total flow is 830,000 gallons in twenty-four hours, and range in temperature from 97.2° to 147° F. The springs have been walled up with brick and arches sprung over the top, with manhole entrances to prevent pollution and allow opportunity for repairs to pipe connections. The water is conveyed through iron pipes to the various bathing establishments and Government reservoirs. The waters are administered both internally and by immersion through the various forms of the baths. The experience of resident physicians demonstrates that the following list of diseases are successfully treated by the use of the baths: Rheumatism, gout, stiff joints, skin diseases, scrofula, catarrh, syphilis, nervous affections, paralysis, spinal diseases, sciatica, specific locomotor ataxia, dyspepsia, uterine diseases, malaria, blood disorders of a chronic character, and alcoholism. While the above list practically covers the

various diseases benefited, experience and experiments are demonstrating the value of the waters in some diseases in which they were formerly supposed to be contraindicated.

There have been 25 leases for hot-water privileges issued to date, 21 of which are active bath houses, 2 are sanatoriums, 1 on which no bath house has been erected, and 1 to the Hot Springs Medical Company for manufacturing medicine. These bath houses operate 542 tubs, which pay water rents to the Government at the rate of $30 per tub per annum. The basis of allowance per tub daily is 1,000 gallons, which requires 542,000 gallons. The charge for baths at the various bath houses is fixed by the Secretary of the Interior, and no house is permitted to charge more than said rate. They are operated under rules and regulations prepared by the Department, the execution of which is placed in the hands of the superintendent.

The monthly reports of the various lessees, required by the rules and regulations, show the past year has been one of unusual prosperity; the volume of business has exceeded all former patronage; a better feeling pervades the management of the different houses; a more liberal spirit is manifested in attention given to details of equipment, furnishings, and general accommodations for the comfort and convenience of the public. Improvements for the betterment of the properties are being made from time to time, stimulated by a healthy competition. One new house has been erected during the year under a new lease, and one new house has been erected under unexpired terms of old lease; another new house is under construction under its present lease.

The rates for a course of twenty-one baths and for single baths now in force are as follows:

Name of bath house.	Course of 21 baths.	Single bath.	Name of bath house.	Course of 21 baths.	Single bath.
Arlington	$10.00	$0.50	Ozark	$4.00	$0.25
Alhambra	5.00	.30	Ozark Sanitarium	6.00	.35
Avenue	6.00	.35	Park	8.00	.45
Eastman	10.00	.50	Palace	7.00	.40
Great Northern	7.00	.40	Rockafellow's	6.00	.35
Hale	7.00	.40	Rector	7.00	.40
Horseshoe	5.00	.30	Rammelsberg	3.00	.20
Hot Springs	7.00	.40	Superior	6.00	.35
Imperial	8.00	.45	St. Joseph's Infirmary	6.00	.35
Lamar	7.00	.40	Waverly	6.00	.35
Magnesia	5.00	.30	Moody	8.00	.45
Maurice	7.00	.40			

The following table shows the several individuals and corporations now holding leases for hot water from the Government reservation, together with the date and expiration of each lease:

Name of bath house.	Lessees.	Tubs.	Date of lease.	Expiration of lease.
Alhambra	Alhambra Bath House Co	40	Feb. 28, 1894	Feb. 28, 1914
Arlington	Arlington Hotel Co	40	Mar. 3, 1892	Mar. 2, 1912
Avenue	Avenue Hotel Co	20	Feb. 17, 1898	Dec. 31, 1902
Ozark Sanitarium	Butterick Publishing Co	8	Sept. 16, 1898	Sept. 16, 1905
Eastman	New York Hotel Co	40	May 12, 1892	May 12, 1912
Great Northern	Curnel S. Williamson	19	May 25, 1897	May 15, 1912
Hale	Roots & Eastman	26	Jan. 1, 1893	Dec. 31, 1907
Horseshoe	D. Fellows Platt	30	Jan. 1, 1895	Dec. 31, 1909
Hot Springs	Mark J. Smith	16	Jan. 1, 1893	Dec. 31, 1902
	Hot Springs Medical Co	4	July 24, 1894	July 24, 1904
Imperial	Fred N. Rix and J. L. Barnes	25	Jan. 1, 1892	Dec. 31, 1906
Lamar	M. C. Tombler and D. C. Buckstaff	40	Jan. 1, 1897	Dec. 31, 1916
Magnesia	Chas. B. Platt	30	Jan. 1, 1895	Dec. 31, 1909
Maurice	Maurice, Convers & Maurice	21	Jan. 1, 1897	Dec. 31, 1916
Ozark	I. W. Chart and F. B. Latta	22	Jan. 1, 1892	Dec. 31, 1902
Palace	Samuel W. Fordyce	23	Jan. 12, 1893	Dec. 31, 1906
Park	Park Hotel Co	40	May 12, 1892	May 12, 1912
Rector	Henry M. Rector	12	Apr. 16, 1894	Apr. 16, 1904
Rockafellow's	Chas. N. Rockafellow	18	Lease expired	
St. Joseph's Infirmary	Sister Mary Aloysius	4	Dec. 31, 1896	Dec. 31, 1901
Sumpter	John J. Sumpter	8	Mar. 7, 1894	Mar. 7, 1904
Superior	Robert Proctor and Chas. N. Rix	16	Sept. 15, 1896	Sept. 14, 1906
Waverly	New Waverly Hotel Co	20	Mar. 24, 1893	Mar. 24, 1913
Rammelsburg	Jeanette Hogaboom, Aaron H. and Milo R. Buckstaff.	18	Jan. 1, 1899	Jan. 1, 1909
Moody	Nicholas M. Moody	10	July 1, 1900	June 30, 1910

The lease of Charles N. Rockafellow expired June 30, 1901.

Under the authority of the Department an official analysis of the waters of the hot springs on the reservation was commenced in the fall of 1900, under the immediate supervision of Prof. J. K. Haywood, of the Bureau of Chemistry of the Agricultural Department, who was detailed for the purpose by the Secretary of Agriculture. The work, which is still in progress, will probably be completed in December of 1901, when the results will be made public. Great interest is being manifested as to this analysis, and the report, when issued, will doubtless be in great demand.

The total amount received for baths during the year was $163,358.80. The amount invested in bath houses, the superintendent says, can be conservatively estimated at $500,000. After deducting water rents, operating expenses, repairs, taxes, and insurance, he concludes that the bath-house business, under present conditions, can be considered a good investment.

The violation of the rule prohibiting drumming to bath houses is the prolific source of much annoyance and vexation. Especially is

this true when the city government licenses the practice under the laws of Arkansas. On this subject the superintendent says:

The rule prohibiting drumming for bath houses was established for the protection of both the public and bath houses, and the faithful compliance with which operates more to the benefit of the bath houses than the public, which fact ought to be an incentive to rigidly adhere to it, as the commissions paid must come directly from their own pockets. So far as the public is concerned, when the Government fixes the maximum charges for baths and establishes the attendants' fees, furnishes the water, and establishes all other rules and regulations for their benefit, it would seem that it had accomplished the full measure of protection necessary. If we accomplished the total suppression of bath-house drumming it would not materially diminish the real evil of drumming. While drumming or soliciting, in the general acceptation of the term, is considered neither immoral nor illegal when applied to the usual and ordinary business transactions, it becomes odious and reprehensible in the extreme when applied to the nefarious practice of trafficking in the sick and debilitated people who come here for relief.

The serious phase of the drumming evil is drumming to doctors, the regulation of which belongs principally to the municipality. Whenever the curse of doctor drumming can be entirely eliminated, other forms of it will fade into insignificance as a natural consequence, as they are mere incidents or adjuncts to it. The solution of this problem is considered difficult owing to the decisions of the courts, which recognize it as legal under the laws of the State.

The evil effects of doctor drumming lies in the deflection of the patient from the honorable, conscientious, and competent physician to some incompetent, conscienceless practitioner whose ignorance and extortion works almost irreparable injury to the sick, and much of the success of this kind of drumming is consummated through misrepresentation and falsehood. The growth of public sentiment against it and the dissemination of warning information and intelligent directions before the visitor leaves home will gradually work its destruction. Much of the open and obnoxious forms of drumming which existed formerly have been replaced by the indirect and more refined systems, which, however, in their effects are none the less iniquitous. Time and spread of useful information will reduce the practice to a minimum.

A measure of relief from this demoralizing practice can be obtained by an amendment to the State law regulating the practice of medicine in the State.

Another, and probably the most effective, would be a supplementary act of the legislature whereby the United States will obtain complete jurisdiction over the reservation. If this is done and the sovereignty of the State is waived as regards jurisdiction over this reservation the Government, through its machinery, can work the complete and total annihilation of this evil.

The receipts from water and ground rents during the year was $18,310. The disbursements for the same period amount to $19,442.12.

The superintendent reports that, after personal inspection, he finds the condition of the creek arch to be satisfactory, and no repairs or attention is needed at this time. This arch was constructed in 1884; is 3,500 feet in length, and the approximate cost was $136,744.78. It not only carries the water of the Hot Springs Creek, but is the receptacle for all surface drainage adjacent to it.

The improvements made during the year, and the additions made to the equipment of the reservation, for which allotments have been made by the Department, consist of the following:

The construction of the uncompleted portion of West Mountain road to the summit, which covers a distance of 2,600 feet, with an average grade of 6 per cent.

The Whittington Park Lakes were drained during the year, and the deposit of washings from the hillsides and decomposed vegetable mass were removed by hauling the same out and spreading upon the park grounds, which cleaned the lake bottoms and at the same time enriched the soil with this fertilizer.

The new cooling tanks for storing water at the free bath house have been built. The capacity of these tanks is 10,000 gallons.

During the year all springs not heretofore provided for have been walled up with brick and arches sprung over the top, with manhole entrances, to permit of examination and repairs to pipe connections.

All the exterior wood and iron work of all Government buildings have been thoroughly painted, also the interior of all that were deemed necessary.

Many improvements of minor importance, though valuable to the reservation and its administration, have been accomplished during the year, such as the relaying of pipe lines, repairs to free bath house, barns, pavilions, roads, walks, and parks. Satisfactory progress has been made in the care and cultivation of the grounds. The system of distribution of the hot water has been improved in many instances, thus facilitating the flow and increasing the temperature.

The act of Congress approved March 3, 1877, entitled "An act in relation to the Hot Springs Reservation in the State of Arkansas" (19 Stat., 380), provides, section 19:

> That a suitable tract of land, not exceeding five acres, shall be laid off by said commissioners, and the same is hereby granted to the county of Garland, in the State of Arkansas, as a site for the public building of said county: *Provided*, That the tract of land hereby granted shall not be taken from the land reserved herein for the use of the United States.

Pursuant to the provisions of this statute, there was set apart by the Hot Springs commissioners 3.62 acres of land, known as block 114, in the city of Hot Springs, and the same was dedicated as the land granted by the United States in the county of Garland, in the city of Hot Springs, as a site for a public building. The county, however, never occupied any of the land so dedicated, but located its court-house and jail at a considerable distance therefrom on other land.

As indicating the purposes for which this tract of land was used by the county authorities, it may be stated that in January, 1880, the county judge of Garland County assumed to lease said land from said county to Baxter & Moore for a term of ninety-nine years for a total rental of $1,025, and these lessees entered into possession and subdivided the lot and sublet considerable portions thereof to innocent par-

ties, who expended considerable sums of money in building upon and improving the same.

In January, 1881, suit was brought in the name of the State of Arkansas for the use of Garland County against Baxter & Moore and their sublessees and the said county judge, to obtain to the county the exclusive title to and possession of said land. The circuit court of Garland County sustained a demurrer to the amended bill filed, "for want of proper parties plaintiff," but the supreme court of the State, in May, 1882, reversed this ruling and remanded the case for further proceedings.

Subsequently said court declared said lease to be a fraud upon Garland County and set the same aside, and following this decision, in January, 1890, a final decree was entered in the circuit court of the State declaring the county to be the owner of block No. 114, adjudging the lease void, and carrying a judgment against said county in favor of the owners of the improvements of $6,144.89, and giving the occupants the right to hold the land until they were repaid by rents or otherwise.

As soon as these facts became known to the Department the matter was brought to the attention of the Department of Justice, with a view to the institution of proceedings against the city of Hot Springs and the county of Garland to recover to the United States the title and the possession of the land known as block 114 in the city of Hot Springs, but the Attorney-General held that, in the absence of any action on the part of Congress declaring a forfeiture or directing the institution of a suit, he would not be warranted in instituting proceedings to recover to the United States the title and possession of the lands granted by section 19 of the act of March 3, 1877.

Under the circumstances, therefore, I have to suggest the advisability of the repeal by Congress of section 19 of the act above mentioned for failure on the part of the county of Garland to use the land granted for the purposes specified in the act, and that the same be disposed of at public sale in the same manner as other lots belonging to the Government in the city of Hot Springs are disposed of, the proceeds of such sale to be applied, as required by existing law, to the management and protection of the reservation.

The act of Congress approved March 3, 1901 (31 Stat., 1188), making appropriations for the sundry civil expenses of the Government for the fiscal year ending June 30, 1902, and for other purposes, provides, among other things—

SEC. 4. That the Secretary of the Interior be, and is hereby, authorized and directed to determine the value of certain condemned buildings formerly located on Hot Springs Mountain Reservation, and on the east side of Valley street, in the city of Hot Springs, in the State of Arkansas, which buildings were condemned by the Hot Springs Commission, and proof of value taken by said commission, under authority of law, and which were destroyed by fire on the night of the 5th day of March, 1877,

before said commission had issued certificates for the value thereof, as they were authorized and directed, and did afterwards do for buildings similarly situated, but not burned. That the value of each building so condemned and burned shall be determined by the Secretary from the petitions and evidence filed before said commission by the owners or occupiers thereof, by order of said commission, and now on file in the Interior Department, or such other evidence as the claimants may file, and after such investigation as he may think proper.

SEC. 5. That a sum of money sufficient to pay for such investigation and the claims so ascertained and fixed by the Secretary of the Interior be, and is hereby, appropriated, out of any money in the Treasury not otherwise appropriated; and the Secretary of the Interior is hereby authorized and directed to pay to such person or persons, claimants, their executors, administrators, the sum or sums of money equal to the values so as aforesaid found by him.

SEC. 6. That the Secretary of the Interior is required to report to Congress the results of his action under the foregoing sections.

Pursuant to the requirements of this statute, I have to report that up to the present time 23 claims have been presented thereunder, 18 of which are still pending, and the remainder, 5, have been allowed as follows, to wit: The estate of Maria Gaines, deceased, late of Hot Springs, Ark., $15,377; Algernon S. Garnett, of Hot Springs, Ark., $1,500; William P. Blake, formerly of Hot Springs, now of Washington, D. C., $2,000; Mrs. Jane Baird, Hot Springs, Ark., $2,000; and John C. Morris and Fleta L. Morris, of Hot Springs, Ark., $2,350.

CASA GRANDE RUIN.

Located near Florence, Ariz., is one of the noteworthy relics of a prehistoric age and people living within the limits of the United States. The land on which it is located is part of 480 acres reserved from settlement by Executive order dated June 22, 1892. At the date of discovery by one Padre Kino, in 1694, it was in a ruinous condition, and since that time has been a subject of record by explorers and historians. The structure is built of the material known as cajon—that is, puddled clay molded into walls and dried in the sun, and of perishable character.

This memorable ruin, the custodian, Mr. H. B. Mayo, reports, is fast falling into decay; that the walls by reason of their age and the action of the elements are rapidly crumbling, and that some action must be immediately taken to prevent the same from entirely disappearing.

He recommends that a roof of asphalt or corrugated iron be placed over the structure, leaving an opening on the sides and overreaching the same, in order that the rain may be prevented from touching the sides; that the walls of the ruin be filled in with cement to prevent their further decay, and also that the ruins be inclosed by high barbed-wire fence in order to exclude trespassers.

These repairs he regards as necessary to the preservation of the ruin, and estimates that $2,200 would be sufficient to cover the expenses of same.

I therefore recommend that the above sum be appropriated by Congress for the preservation of this remarkable ruin.

ELEEMOSYNARY INSTITUTIONS.

An act of Congress entitled "An act to establish a board of charities for the District of Columbia," approved June 6, 1900 (31 Stat., 664), provides, among other things, that said board of charities—

shall visit, inspect, and maintain a general supervision over all institutions, societies, or associations of a charitable, eleemosynary, correctional, or reformatory character, which are supported in whole or in part by appropriations of Congress made for the care or treatment of residents of the District of Columbia; and no payment shall be made to any such charitable, eleemosynary, correctional, or reformatory institution for any resident of the District of Columbia who is not received and maintained therein pursuant to the rules established by such board of charities, except in the case of persons committed by the courts, or abandoned infants needing immediate care.

The Attorney-General, on the 12th of October, 1900, in construing this act, held that the Government Hospital for the Insane, Freedmen's Hospital, the Columbian Institution for Deaf and Dumb, and the Washington Hospital for Foundlings, created by prior laws and placed under the supervision of the Secretary of the Interior, came within the terms of said act of June 6, 1900, and that—

with the exception that the board of charities is given the general supervision of these institutions, and, under the order of the District Commissioners, the power of investigation, with the duty of submitting a report and recommendations to Congress, the powers and duties of the Secretary of the Interior are unchanged by the act of June 6, 1900, and remain the same as before its enactment.

In discussing this subject in my last annual report I directed attention to the fact that a divided supervision or control over the class of institutions enumerated, particularly where the lines of division are uncertain and not easily understood, would tend to embarrass the immediate management of each institution and to materially detract from the desired standard of excellence. For that reason, which applies with equal force at this time, I desire to earnestly renew my previous recommendation that as to each of said institutions, the authority, etc., of the board of charities be transferred to the Secretary of the Interior, or the authority and responsibility of the Secretary of the Interior be transferred to the board of charities.

Furthermore, that considering the character and purpose of each institution and the extent of the supervisory authority of the Secretary of the Interior over the same prior to the passage of the act above mentioned, probably the best results could be obtained if the adminis-

tration of the affairs of the Columbian Institution for the Deaf and Dumb and the Washington Hospital for Foundlings devolve wholly upon the board of charities, and the supervision of the affairs of the Government Hospital for the Insane and the Freedmen's Hospital and Asylum were placed exclusively under the supervision of the Secretary of the Interior.

The Government Hospital for the Insane.

The annual report of the board of visitors shows that the affairs of the hospital have continued satisfactory during the year. Both in the care and treatment of the patients and in the physical improvement of most of the departments of the institution there has been substantial progress. The number of patients in the hospital at the beginning of the year was 2,076; there were admitted during the year 655, making a total of 2,731 under treatment. During the year there were 226 deaths, 235 were discharged recovered, 77 improved, 17 unimproved, leaving on the records at the close of the year 2,176, divided as follows: Army, 847; Navy, 123; Marine-Hospital Service, 31; from civil life, 1,175.

The increase in the population the past five years is as follows: In 1896, 33; in 1897, 32; in 1898, 86; in 1899, 85, and in 1900, 138.

The number of patients remaining in hospital at the close of the year is 100 greater than were present at the close of the year previous; the admissions for the year numbered 655, a considerably larger number than have been admitted in any previous year. As compared with the preceding years the proportion of those remaining who were received from the Army, Navy, and Marine-Hospital Service is slightly reduced from 46.14 per cent to 46 per cent.

The percentage of recoveries was 42.34 of the total discharges and deaths, a rate higher than for any year of the past decade, the highest percentage during that period being 36.56 for the year 1898–99. This increase is attributed principally to the larger number of admissions of young men in whom the disease existed in more favorable form. The deaths were 10.93 per cent of the average number resident during the year, a rate slightly above the average of 10.44 per cent for the past ten years.

The proportion of colored has slightly increased from 18.6 per cent at the beginning of the year to 18.84 per cent at the close. The proportion of women has also slightly increased from 23 per cent to 23.75 per cent of the whole population.

The venerable and highly esteemed president of the board of visitors, Rev. Byron Sunderland, D. D., passed away on the 30th of June, 1901; he was a member of the board of visitors for sixteen years, five of which as its president. He took an active interest in the work of the hospital and his loss is to be deplored.

Great progress has been made in the training school for nurses; the resulting systematic development of practical nursing in all the hospital wards has had a noticeable effect in stimulating the physicians and nurses to greater efforts in providing for the patients the best that their opportunities afforded. A class of 26 nurses was graduated at the expiration of a course of two years of about eight months each, on May 31 of this year; and 12 of the female nurses are now employed in the male hospital wards where their work has been eminently satisfactory.

The pathological department has been enlarged by the purchase of a bacteriological equipment, and an assistant to the pathologist has been employed for the more especial object of developing the clinical work. Blood examination for malaria and typhoid fever are required in every suspected case. Urinalysis is made in every case admitted, and preparations are under way to begin a study of stomach digestion and the effects upon it of the administration of various remedies, including hypnotics. Every case of tuberculosis is isolated as soon as possible, and opportunities for infection of other patients carefully guarded against.

The following improvements, upon which work was commenced during the last year, have been completed, to wit: A new store building, including sewing room, tailor shop, office for the bookkeepers, and a cold-storage plant; the new waterworks, including 6 additional wells, which have been drilled to an average depth of 225 feet, the water therefrom being raised by compressed air to a reservoir holding about 120,000 gallons, from which it is pumped to a tank in the water tower having a capacity of 60,000 gallons. The pressure, with the tank half full, is about 50 pounds at the ground level, sufficient to throw a large stream of water over any of the buildings. Hose carts, with 200 feet of hose on each, will be located at convenient points about the buildings and grounds, and these, in connection with chemical extinguishers, placed in the wards and rooms of the hospital, provide ample means to prevent the extension of fire and for its prompt extinguishment. Rules for the guidance of officers and employes, in case of fire, are in course of preparation, and a fire drill will be one of the regular duties. A railroad switch, about 4,400 feet long, extending from the Alexandria branch of the Baltimore and Ohio Railroad to the boiler house of the hospital, and with two sidings, each about 500 feet in length, has been completed at a total cost of $22,000. A trestle has also been constructed at the power house for dumping coal cars.

A large amount of repairs has been made on the dairy barn, and a silo, holding 200 tons of ensilage, has been constructed and filled for winter feed. The stock in the dairy is gradually being renewed, and it is confidently expected that by next spring it will provide the entire amount of

milk required for the hospital. A locomotive has been purchased at a cost of $1,950, which will be valuable in the delivery of goods to the institution and in the carrying of material for the hospital buildings now in process of erection. As the Baltimore and Ohio railroad, which runs through the hospital grounds, exacted an additional rate of 20 cents per ton for delivering freight in carloads from its line up the Government switch, it is regarded as more economical and much more convenient for the hospital to have its own engine for hauling purposes. With the appropriation for roads, grading, etc., for the extension of the hospital, a suitable roadway is being constructed from the railroad switch or siding at the boiler house to the site of the buildings of the extension. Under the appropriation of $25,000 for a stable, plans for such a building, to be located on the east side of Nichols avenue near the dairy barns and facing the avenue, were prepared for one capable of accommodating 60 horses and mules, with abundant room for carriages, farm wagons, and carts. After due advertisement, contract for the work was let to the lowest bidder; the work has begun, and it is expected that the building will be completed within six months.

The crowded condition of the hospital was brought to the attention of Congress during the first session of the Fifty-sixth Congress, and in the sundry civil act approved June 6, 1900 (31 Stat., 619), provision was made for the preparation of plans for the extension of the hospital to accommodate 1,000 patients, in the following terms, to wit:

> The board of visitors and the superintendent shall prepare plans, specifications, and estimates for an extension of the hospital sufficient to provide for one thousand patients. Said extension shall be of fireproof construction and suitable for all special classes of acute insanity. Said plans shall include all necessary domestic buildings and all buildings required for the proper care of one thousand patients and the requisite nurses and employees, and shall be approved by the Secretary of the Interior. The total cost of all the buildings, machinery, and equipment, including heating, lighting, sewerage, and water supply, under said plans shall not exceed nine hundred and seventy-five thousand dollars, within which sum and under such plans the Secretary of the Interior is authorized to enter into contract or contracts for the extension of the hospital as herein specified, upon lands already owned by the Government or upon such suitable lands as may be donated to the Government within th District of Columbia for that purpose, toward which, including the expense of the preparation of plans and specifications, there is hereby appropriated the sum of fifty thousand dollars.

Accordingly, plans and sketches from a number of firms of architects were solicited, and from those submitted the plans of Messrs. Shepley, Rutan & Coolidge, of Boston, Mass., providing for 15 buildings in all, were accepted as being the most desirable for use in connection with the extension of the Government Hospital for the Insane.

The plans, as finally approved, provided a liberal allowance of accommodations for 1,000 patients and 200 employees, together with heating, lighting, and plumbing complete as far as comprised in these buildings, and also included a building designed for administration and office pur-

poses. Proposals for the work were duly solicited through the medium of the press, and when those received were opened it was found that the proposal of the lowest bidder, Messrs. Horton & Hemenway, of Providence, R. I., was largely in excess of the appropriation available for the work.

Two years ago, when the estimates were submitted to Congress of the amount required for the construction of an extension of the hospital, prices of building material and of labor were such as to justify the belief that for the amount desired provision could be made in the plans, not only for buildings for the accommodation of 1,000 patients and the necessary number of employees, but for a much-needed administration and office building and a modern heating and lighting plant for the entire hospital. Subsequently, however, there was such a decided advance in the prices of material, labor, etc., as to increase the cost for construction at least one-third, which, in all probability, accounts for the failure to secure a bid for all the work covered by the plans within the available appropriation. The pressing needs of the hospital for additional room demanded that, if possible, there should be no further delay in the commencement of the work of construction; the conditions of the appropriation required that the buildings should be fireproof and adapted to the needs of the special classes of acute insane. Under these conditions an effort was made to eliminate such buildings from the plans as it was believed could be omitted without conflicting with the requirements of the law. Accordingly, in the exercise of the right reserved to the Secretary of the Interior in the proposals for the work, the administration and two other buildings were dispensed with, leaving remaining 12 buildings, the construction of which was regarded as absolutely necessary.

The specifications for these several buildings were carefully examined and such changes therein made as was believed would not impair the safety or efficiency of the buildings. The first appropriation of $50,000 was reserved for the payment of the architects' fees, printing, advertising, and certain incidental expenses relating to the preparation for the work of construction. Of the appropriation of $925,000, made in the act of Congress approved March 3, 1901 (31 Stat., 1163), and hereinafter referred to, $15,000 was reserved for the expenses of superintendence and such incidentals as related thereto, and the balance, $910,000, was fixed as the sum available for the work of constructing the 12 buildings. By omitting the buildings above referred to and making all the changes deemed advisable in those remaining, the proposal of the lowest bidder, Messrs. Horton & Hemenway, was brought within the limit of the amount allotted for the work and the contract for the construction of the extension of the Government Hospital for the Insane for that sum, under the modified specifications, was entered into with them on the 6th day of September, 1901, the

work to commence October 7, 1901, and to be completed in 550 working days. In the act making appropriation for the sundry civil expenses of the Government during the fiscal year ending June 30, 1902, approved March 3, 1901 (31 Stat., 1163), provision is made, among other things:

For continuing the work of the extension of the hospital sufficient to provide for one thousand patients, as authorized by the sundry civil appropriation act approved June sixth, nineteen hundred, nine hundred and twenty-five thousand dollars, to be immediately available: *Provided*, That the Secretary of the Interior is hereby authorized and directed to exchange a tract of land containing sixty acres, more or less, east of Nichols avenue and south of Congress Heights, for sixty acres, more or less, adjoining the grounds of the Government Hospital for the Insane on the south, to be selected by said Secretary, the exchange to be made acre for acre. And the Secretary of the Interior is further authorized, if in his judgment advisable, to exchange such portion as he may deem equitable of the agricultural land now owned by the Government, or of the farm opposite Alexandria, and known as Godding Croft, for eighty acres, more or less, lying immediately adjoining this said sixty acres and south of the present building site of the hospital. In case such exchange is made the Secretary is also authorized in his discretion to grant a roadway along the south side of said tract, from Nichols avenue to the river, not exceeding ninety feet in width. Any of the buildings authorized in the sundry civil appropriation act approved June sixth, nineteen hundred, for the Government Hospital for the Insane may be erected on land now owned or that may be acquired hereunder by the United States for the Government Hospital for the Insane.

Pursuant to the authority contained in this act efforts were made to effect an exchange of lands, but after repeated attempts it has been found to be impracticable to get those owning or controlling the lands in question to make any exchange on what the Department regards as an equitable basis. The buildings of the extension, therefore, will be located partly on the farm lands east of Nichols avenue and partly on the present building site of the hospital. The failure, however, to make the exchange of lands in question has not been permitted to retard the word of construction, the contractors having commenced active work on the extension some time ago. Their contract includes all the necessary buildings for accommodating 1,000 patients of all the special classes and 200 employees. The buildings are complete, including heating apparatus, lighting, ventilation, and plumbing; they are fireproof, modern in every respect, and include all the requirements for the most enlightened care and treatment of these classes of insane, as well as dining, serving, operating, and all the domestic rooms necessary. As heretofore stated, it was not found possible to include in this contract the administration and office building, which should be a part of the modern hospital of this character and which is, for the efficient management of this institution, an important necessity, nor the enlargement and remodeling of the central heating power and lighting plant for the entire hospital, and appropriate estimates for the latter will be submitted to Congress through the Secretary of the

Treasury. The board of visitors, in discussing the legislative needs of the institution, state that—

We also desire respectfully to call your attention to the necessity for amending the law (act of August 7, 1882, 22 Stats., 330) giving the Commissioner of Pensions authority to order the payment of pensions to the hospital for the support of the pensioners in the case of soldiers admitted from the National Home for Disabled Volunteer Soldiers, who are pensioners, and who have no dependent relatives as described in the law. The law as it now stands requires the entire pension to be paid to the hospital in every such case, together with all arrears of pensions, without regard to the amount. The regular rate of board for pay patients has been fixed by this board for many years at $5 per week, and many of these pensions amount to more than the sum named. To take all of the pension allowed the soldier, for a service for which the regular charge is less than the pension, would seem to be manifestly unjust. Further, the law does not permit any special use of the pension so paid to the hospital for the soldier's individual benefit, as it is expressly provided that it shall be paid into the support account of the hospital. It would seem, too, that even in cases where the pension of the soldier does not amount to the regular rate of board it is scarcely just to take from him the entire amount, leaving him nothing for such incidental and individual expenses as the rules will not permit to be paid from the hospital funds.

This board, with the superintendent, is also much interested in securing some additional legislation regulating the commitment and discharge of patients admitted to the hospital from the District of Columbia. Particularly is this true as relates to the authority to discharge patients from the hospital. The law as it stands has not been changed in this respect since the hospital was organized, forty-six years ago, and contemplates the release of patients only when they can be discharged as cured. The fact, however, is that in the practical operation of such a hospital it is often advisable to give a patient a trial visit outside of the hospital before final discharge, and in still other cases, where further hospital treatment can be of no advantage and where patients are entirely harmless, authority should be given to release them to the care of their friends.

I concur in the conclusions of the board as to the necessity for legislation along the lines indicated, and at the earliest practicable date will submit to Congress such amendments to the existing law as the circumstances require.

In discussing the matter of the change in the law relative to disbursement of moneys for the Government Hospital for the Insane, I stated in my last annual report that—

After the decease of the former superintendent a committee was appointed to examine his books and accounts as a disbursing agent of the institution. In reporting thereon, after referring to the fact that his accounts were found to be correct, balanced, and closed, and so reported by the accounting officers of the Treasury, they state, referring to the matter of the disbursements of the institution, that—

"Your committee are of the opinion, however, that the best interests of the public service would be subserved if the disbursement of the appropriations for the hospital was taken therefrom and placed under the direct supervision of the Secretary of the Interior, to be disbursed by the disbursing officer of the Department of the Interior on vouchers properly certified by the superintendent of the hospital and approved by the Secretary of the Interior. One of the principal reasons advanced why such a change should be made is that the superintendent of the hospital is now the purchasing officer, the receiving officer, the disbursing officer—three offices in one. The

act of March 3, 1855 (sec. 4837, Rev. Stat.), made him a special disbursing agent. Under existing United States Treasury regulations he is required to render his accounts monthly, and no advance of funds is allowed him in any month in excess of his bond. On the contrary, the disbursing officer of the Department is required to render his accounts only quarterly, and is not confined to the limit of his bond in advances from the Treasury, so that money could always be promptly obtained from the Treasury for the payment of the bills of the hospital upon presentation of same. Under the present condition of affairs it has often occurred that persons selling goods and supplies to the hospital, expecting to receive cash when such have been furnished, have been compelled to wait weeks and months for payment. This condition of affairs should not be tolerated by the Department for a moment. Business methods prevail in every other branch of the Department of the Interior, and its creditors are promptly paid their bills on presentation of the same. Such should be the rule with the bills against the Hospital for the Insane. The merchant sells his goods to the hospital at a trifle above cost, expecting to receive promptly cash payment for the same. Failure to so pay him frequently results in serious embarrassment to his business."

Concurring in this conclusion, I urgently recommend the incorporation in the sundry civil bill, when ready for consideration by Congress, of the following paragraph, to wit:

And hereafter the disbursing clerk of the Department of the Interior is hereby required to act as disbursing clerk for the Government Hospital for the Insane, and to disburse all moneys appropriated for the said hospital, under the direction of the Secretary of the Interior, on vouchers duly certified by the superintendent thereof and approved by the Secretary of the Interior. And the said disbursing clerk herein provided for shall, before entering upon his duties as such, give bond to the United States in such sum as the Secretary of the Treasury may deem proper and necessary, which bond shall be conditioned that the said officer shall render a true and faithful account to the proper accounting officers of the Treasury quarter yearly of all moneys and properties which shall be received by him by virtue of his office, with sureties to be approved by the Solicitor of the Treasury. Such bond shall be filed in the office of the Secretary of the Treasury, to be by him put in suit upon any breach of the conditions thereof. And for this service to be performed the said disbursing clerk, hereinbefore provided for, shall receive for the faithful discharge of his duties an annual compensation of $1,000, payable from the appropriation for current expenses of the Government Hospital for the Insane. And all acts heretofore made by Congress that are inconsistent with the provisions of this act be, and the same are hereby, repealed.

The necessity for the change in the law above recommended in regard to disbursements is further evidenced by the fact that in order to prevent embarrassment in the matter of payments, under contract for the work on the extension, to be made from the appropriation of $975,000 for the extension of the Government Hospital for the Insane, it became necessary on the 10th day of August, 1901, to appoint Mr. George W. Evans, the disbursing officer of this Department, a "special disbursing agent for the erection of an extension at the Government Hospital for the Insane." For the disbursement of these moneys he was required by the Secretary of the Treasury to give an additional bond of $25,000, which was approved on the 18th day of October, 1901.

Freedmen's Hospital.

The Freedmen's Hospital was appropriated for and placed under control of the Secretary of War by act of March 3, 1871 (16 Stat., 506), and transferred to the Department of the Interior by act of June 23, 1874. (18 Stat., 223.) The supervision and control of expenditure of appropriations was transferred to the Commissioners of the District of Columbia by act of March 3, 1893. (27 Stat., 551). The appointive and general administrative power, however, is still vested in the Secretary of the Interior.

The report of the hospital, which was submitted by Asst. Surg. A. F. Warfield, who acted as surgeon in chief from the date of the acceptance of the resignation of Director A. M. Curtis, on the 2d day of August, 1901, shows that the work has been conducted along the lines indicated in previous reports, and that the institution is in a fairly prosperous condition. The total number of patients treated within the wards and dispensaries during the year was 8,356, a decrease over the previous year of 388. The number remaining in the hospital June 30, 1900, was 138. During the year 2,247 patients were admitted, divided as follows: Colored males, 1,065; white males, 184; colored females, 965; white females, 33. One hundred and sixty-seven births are recorded, making a total of 2,552 in the hospital; 2,425, including 172 deaths, were discharged, leaving 127 remaining in the hospital on the 30th of June, 1901. Five thousand eight hundred and four out patients were treated during the year. They were those who came to the hospital for treatment at the various clinics and then returned immediately to their homes. Of that number, 547 received attention in the medical, 547 in the surgical, and 210 in the gynecological departments.

The surgical work of the hospital has been of considerable magnitude, and was doubtless permitted to develop at the expense of the medical, as appears to be evidenced by the increased per cent of loss in medical cases. Hereafter neither of these branches of the hospital work will be permitted to grow at the expense of the other, but both will be developed together and provided with equal facilities.

Of the 2,247 patients admitted, 596 were residents of the District of Columbia, 860 from the State of Virginia, 430 from the State of Maryland, 72 from North Carolina, 46 from Pennsylvania, 30 from South Carolina, 23 from New York, 10 of unknown nativity, 59 from foreign countries, and the remainder, 121, were from the several States and Territories.

Satisfactory progress has been made in the training school for nurses, the high standard which secured its recognition by the American Association of Nurses having been maintained. One hundred and ninety-two applications were received during the year for admission to the

school, 18 were accepted, 2 rejected, and 1 dismissed. Sixteen nurses graduated in May, 1901, leaving 29 nurses on the staff, 2 probationers, and 3 male assistants on duty on the 30th of June, 1901. The appendix to the report contains interesting information in regard to the school, the requirements exacted of the candidates desiring to enter the course of training, and the work accomplished.

Five hundred and ten operations were performed, including many major cases. Three hundred and forty recovered, 133 improved, 6 remained unimproved, and 14 died. Four hundred and fifty-four emergency cases were treated during the year.

In the interest of the better administration of the affairs of the institution, a reclassification of the officers and employees was made. The salary of the surgeon in chief was reduced from $3,000 to $2,500 per annum; that of the first assistant surgeon was increased from $900 to $1,500 per annum; a new position, that of assistant surgeon, was created at $1,000 per annum; the salaries of a number of minor employees were increased to a sum commensurate with the character and quality of services rendered, and a number of employees whose services were found to be unnecessary were dispensed with. At the expiration of the present fiscal year the present practice of paying internes for their services will be abandoned.

Attention is called to the urgent need for a new building large enough to cover all the various departments of the hospital under one roof, equipped with modern appliances. The present buildings are old, inadequate frame structures, difficult to heat, troublesome to ventilate, and inaccessible. The acting surgeon in chief also calls attention to the fact that new ranges are needed in the culinary departments, and that a new laundry outfit should be at once procured to take the place of the present apparatus, which is worn out and wholly inadequate for efficient service. For that purpose he recommends the sum of $1,500. This sum, he states, will place facilities at the disposal of the hospital which will greatly enlarge its usefulness, increase the efficiency of the service, and prevent unnecessary labor of its officers and employees.

Dr. Wm. A. Warfield was promoted from first assistant surgeon to surgeon in chief October 1, 1901.

The dual control of this hospital still continues, expenditure of the funds appropriated by Congress for its management being under the control of the District and the appointive and chief administrative power being vested in the Secretary of the Interior. I have heretofore expressed the opinion that the supervision of this institution, both fiscal and administrative, should be unified, and this conclusion another year's experience in its management has materially strengthened. Fifty-four thousand dollars was appropriated by Congress for the management of this institution for the past fiscal year,

half of which, under existing laws, is payable from the funds of the District of Columbia, the other half being paid by the United States. There were 596 residents of the District of Columbia treated in the hospital during the past fiscal year at a net per capita cost of $40.53. As long as this hospital is maintained as an independent institution, caring principally for indigent District transients, I fail to see the justice of imposing upon the District the duty of defraying one-half of its expenses. Considering the comparatively small number of persons from the District cared for therein, a more equitable arrangement would be to require it to pay only for such residents of the District as are accommodated at the institution. I accordingly renew the recommendation contained in my last annual report, that the law be amended so as to provide that the whole expense of the maintenance of Freedmen's Hospital and Asylum be borne by the United States and that the Commissioners of the District of Columbia be authorized to enter into a contract with the Secretary of the Interior for the care, at such rate per capita as may be determined upon, of all persons from the District cared for at the institution.

Columbia Institution for the Deaf and Dumb.

The report of the president of the Columbia Institution for the Deaf and Dumb, made pursuant to the requirements of the act of February 16, 1857 (11 Stat., 161), shows that the pupils remaining in the institution July 1, 1900, numbered 126; admitted during the year, 38; since admitted, 38; total, 202. Of these, 138 have been in the collegiate department, representing 31 States, the District of Columbia, Canada, and Ireland, and 64 in the primary department. Thirty-eight of these pupils were admitted as beneficiaries from the District of Columbia, and 96 have been admitted to the collegiate department under the acts of Congress approved August 30, 1890, and June 6, 1900, which provided for an increase in the number of free scholarships in the institution.

The courses of study in the several departments remain unchanged from those of the two years previous, and as an adjunct thereof it has been the custom of professors, instructors, normal fellows, and members of the senior class of the college to give lectures to the students and pupils during the winter.

The greatly increased demand for technical instruction led the college faculty to make a further step toward the establishment of regular technical courses, and it is a great advantage for deaf students who desire technical training to obtain the foundation for it under instructors who are familiar with their habits of thought and with their earlier education, as such work may be most valuable to the students later in life, aiding them in choosing their professions and earning a livelihood.

The total receipts of the institution from all sources amounted to $76,955.28, of which $65,500.39 was appropriated by the United States

and $8,721 was received for board, tuition, room rent, etc. The expenditures were $73,955.28, and $3,000 expended for special repairs.

The estimates for the fiscal year ending June 30, 1903, for the support of the institution, including salaries and incidental expenses, for books and illustrative apparatus, and for general repairs and improvements, $69,000; and for repairs to the buildings of the institution, including plumbing and steam heating apparatus, and for repairs to pavements, $3,000; also, for a deficiency in the appropriation for the current year, $2,000, this having arisen in consequence of the increase in the number of the beneficiaries, as provided for in the act of June 6, 1900, above mentioned.

Maryland School for the Blind.

Under section 2 of the act of Congress approved May 29, 1858 (11 Stats., 294), the Secretary of the Interior is authorized to place for instruction in an institution for the blind, in the State of Maryland or some other State, the indigent blind children of teachable age who are children of persons actually engaged in the military and naval service of the United States, and under section 4869 of the Revised Statutes the indigent blind children of teachable age belonging to the District of Columbia.

The report of the superintendent of the institution shows that in pursuance of this authority there were at the close of the fiscal year 1900 22 blind children under instruction in the Maryland School for the Blind at Baltimore, Md. Since that time 7 pupils have been admitted and 4 withdrawn, leaving 25 beneficiaries at the institution on the 30th of June, 1901. Two of those withdrawn have obtained positions in similar institutions and are doing good work.

The course of instruction commences with the kindergarten and includes a thorough English education, embracing studies of a high-school grade. The music course embraces vocal and instrumental instruction, harmony, and thorough bass, the school being equipped with a grand organ, pianos, and orchestral instruments. Instruction in piano tuning, broom and mattress making, and chair caning is given to the boys, while the girls are taught plain and machine sewing, mending, knitting, and various kinds of fancy work. Proper attention is given to the physical development of the pupils, as blind children do not take as much exercise as those who have sight. The teachers employed therein are experienced, capable, and devoted to their work.

The total amount expended during the year for the care and maintenance of the indigent blind children of the District of Columbia was $6,937.50, one-half of which amount is paid from the revenues of the District of Columbia and the other half out of the Treasury of the United States, pursuant to the act of Congress approved March 3, 1899 (30 Stat., 1101).

Howard University.

The president of Howard University, J. E. Rankin, D. D., reports that the progress made has been satisfactory, and the growth of the institution has been larger than in any previous year.

The total number of students who entered the several departments aggregated 886, from forty different States and Territories and from ten foreign countries. Of that number 36 withdrew for various causes before the end of the year.

There are now eight practical working departments connected with the university—the English, which is designed to fit pupils for intelligent citizenship and practical business, in which 159 students were in attendance; the preparatory, which fits pupils for college, 151 students; the collegiate department, where pupils are classified as in other American colleges, 46 students; the department of pedagogy, for training teachers, 173 students, of which number 30 are teachers in the city schools, who recognize the superior advantages offered for training in the science and art of education.

In the medical department, which includes the dental and pharmaceutical courses, there were 35 graduates. From the law department there were 18 graduates with the degree of LL. B.

In the theological department 62 entered, about nine-tenths of whom supported themselves as waiters, barbers, watchmen, and kindred employment. Nearly all, probably all, are engaged in various kinds of Christian service. Eight denominations are represented among the teachers and students, and all work together in harmony. This department receives no Government aid and is in great need of an adequate endowment from private sources, that the work may be put upon a permanent and enlarged basis. The character of the work of this department is evidenced by the frequent call of its graduates to pulpits and other responsible positions.

In industrial work efficient instruction is given in carpentry, printing, bookbinding, sewing, cooking, as well as theoretical and practical agriculture.

During the year $100 of the university fund was expended, under the supervision of the professor of biology, in providing hotbeds and setting out fruit trees for the practical instruction of the students in agriculture. The trustees urge that the sum of $1,000 be annually appropriated by Congress for the furtherance of work in this direction.

Attention is directed to the system of heating Miner Hall and Clark Hall, which is imperfect and unsafe, being by single coal stoves, called egg stoves, for each room. These stoves are easily thrown down, when their red-hot contents ignite the floor. Such accidents frequently occur. An appropriation of $5,125 by Congress is asked to introduce a new system of heating in these large buildings.

The university expended during the year about $2,800 for repairs of buildings, of which $2,000 was appropriated by Congress. The appropriation of $900 for the law and general library was expended under the direction of the several faculties, one-half of said sum for each library. Nothing was expended from the fund granted by Congress, directly or indirectly, for the theological department.

The growth of the university has been so rapid and the increase in the number of teachers so necessary that there has been a deficiency in the salary account every year, and an additional appropriation of $3,000 is asked to meet this demand, to be apportioned among the pedagogical, preparatory, and English departments.

Washington Hospital for Foundlings.

This institution is under the care of a corporation created by the act of April 22, 1870, to carry into effect that provision in the last will and testament of Joshua Pierce devising to certain trustees fourteen parcels of land in the city of Washington, D. C., to be held as a site for a hospital for the reception and care of destitute and friendless children. It is managed by a board of directors, who are required to report annually to the Secretary of the Interior, and is supported in part by contributions from benevolent persons and societies and in part by appropriations by Congress.

The report of the board of directors of said institution, made in pursuance of the requirements of the act above mentioned, shows that 95 children were provided for during the fiscal year ended June 30, 1901, of which number 47 were remaining in the institution from the previous year.

The adoptions for the year were 20, one was transferred, and thirty-three deaths recorded; of the latter, thirty were under 9 months of age, two were 1 year old, and one was 2 years old, leaving forty-one remaining at the hospital at the end of the fiscal year 1901.

A new laundry has been constructed during the year at a cost of $1,500, the funds having been provided from private contributions.

Including a balance of $422.98 from last year, the total receipts from all sources were $7,894.07, of which amount $7,776.43 was expended in the operation of the institution, leaving a cash balance of $117.64, on June 30, 1901.

The daily average of children is about 40 – all foundlings, ranging in age from 5 years to a few hours. The best work of the institution is in the adoptions, of which there have been 174 since the hospital was opened nearly fourteen years ago; and the board of directors state that, in order to carry out this work of charity and beneficence, it is compelled to ask that the appropriation of $6,000 be continued by

Congress during the fiscal year ending June 30, 1903; otherwise the institution would be forced to close its doors.

A supplemental report of the hospital submitted under date of November 12, 1901, is hereto appended, page 262, marked Exhibit G.

I approve of this charity and recommend that Congress appropriate the funds desired in order that the work of the hospital may be properly continued.

THE ARCHITECT OF THE CAPITOL.

The Architect of the Capitol, Mr. Edward Clark, in his annual report of the operations of his office, sets forth in detail the various improvements and repairs made to the Capitol building during the last fiscal year. The principal improvement to the building was the construction of 29 committee rooms in the space formerly occupied by the Congressional Library. Included in this work was the installation of the necessary apparatus for heating, ventilating, and lighting, and the construction of a marble vestibule at the principal entrance leading to the rooms. The courts adjoining the rooms were lined up with white enameled brick, and,for convenient access to the several floors two elevators operated by electricity were provided. For the heating and lighting there was procured and installed one 250-horsepower water-tube steam boiler and two 250-horsepower engines and dynamos. The ventilating system includes a large fan operated by an 8-horsepower electric motor placed in the subbasement story, the ducts leading therefrom running to the several floors through a special air way and ducts constructed over the ceilings of the corridors. In carrying out this work the lower story of rooms beneath the library space were connected with this system of heating and ventilating.

In addition to the customary repairs in other parts of the building, consisting of general work throughout the building, overhauling of the plumbing, steam fitting and lighting apparatus, and the care of the machinery, two new electric elevators, at a cost of $12,658.85, have been installed in the House wing of the Capitol. A large number of the rooms have been wired for lighting, painted, and decorated.

The Architect reports that the condition of the Capitol grounds has been much improved during the last season and that the lawns adjacent to the terrace surrounding the building have been renewed. All needful repairs have been made to the artificial stone paving and asphalt roadways, and all the necessary trimming of trees and shrubbery has been done.

Improvements have been made at the House and Senate stables and engine house, where additional stalls and wagon sheds have been provided and new paving put in.

At the court-house two of the principal court rooms have been provided with a new system of ventilation. The exterior of the old building has been painted, the grand-jury rooms repaired, and a new bathroom fitted up. Rooms formerly occupied by the restaurant were vacated and new floors put in and fitted up as file rooms. Other new quarters have been assigned the restaurant. Improvements were made to the plumbing and heating apparatus throughout the building.

The expenditures for the fiscal year ended June 30, 1901, have been as follows: Annual repairs to Capitol, $49,090.86; improving Capitol grounds, $16,782.15; lighting Capitol grounds, etc., $30,000; steam heating and machinery in the Senate, $3,285; engine house, Senate and House stables, $1,500, and flags for the Capitol, $100.

Appended to the report is a detailed statement showing the various improvements during the year, together with a descriptive list of the statuary and the paintings in the Capitol building.

PENITENTIARY BUILDING, STATE OF WASHINGTON.

In the deficiency appropriation act approved March 3, 1893 (27 Stat. L., 661), an appropriation for the purchase of a site in the State of Washington, and for the erection of a penitentiary thereon, was made in the following terms:

> Penitentiary building, Washington: To carry into effect section fifteen of an act entitled "An act to provide for the division of Dakota into two States, and to enable the people of North Dakota and South Dakota, Montana, and Washington to form constitutions and State governments, and to be admitted into the Union, and on an equal footing with the original States, and to make donations of public lands to such States:" For the purchase of grounds, and the erection thereon of a penitentiary, in the State of Washington, under the direction and supervision of the Secretary of the Interior, and upon such tract or parcel of land in said State as shall be designated by said Secretary, thirty thousand dollars: *Provided*, That the money hereby appropriated shall be devoted exclusively to the purchase of the necessary grounds and to the erection of a penitentiary in said State; and the penitentiary of the State of Washington is hereby located at or near the city of Walla Walla, Wallawalla County, in said State.

Thereafter a tract of land, consisting of 40 acres, near the city of Walla Walla was purchased by the Department as a site on which to locate the penitentiary buildings. The Attorney-General was requested to direct an officer under his supervision in Washington to indicate on the site purchased a suitable location for the building. He, however, declined to do so, holding, in effect, that it was not the intention of Congress to provide in the act of March 3, 1893, for the construction of a Federal penitentiary at Walla Walla, but merely one for the State of Washington. Accordingly, in the annual report of this Department for 1896 the attention of Congress was directed to the matter, to the

end that the act be so amended as to more clearly express the intention of Congress, and that authority be conferred upon the Secretary of the Interior to convey the land already purchased to the State, etc. The sundry civil appropriation act approved June 4, 1897 (30 Stat., 56), provided, among other things, in relation to this penitentiary—

> That the Secretary of the Interior be, and is hereby, authorized to apply the sum of twenty-five thousand four hundred and forty-six dollars and ninety-three cents, being balance remaining unexpended of the appropriation made by the "Act making appropriations to supply deficiencies in the appropriations for the fiscal year ending June thirtieth, eighteen hundred and ninety-three, and for prior years, and for other purposes," approved March third, eighteen hundred and ninety-three, for the purchase of a site in the State of Washington, and for the erection of a penitentiary thereon, to the construction of a wing to the penitentiary building at Walla Walla, in the State of Washington.
>
> That the Secretary of the Interior be, and is hereby, authorized to convey the land already purchased under the said act to the State of Washington and to transfer to the said State of Washington the penitentiary building when completed.

Pursuant to the authority contained in this latter act, specifications for a penitentiary building, to be constructed as an addition to the State penitentiary building at Walla Walla, Wash., were prepared and approved by the Department, and proposals for the construction of the building were solicited by advertisement in the public press under date of June 23, 1900.

Of the bids received, that of the Pauly Jail Building and Manufacturing Company, of St. Louis, Mo., was found to be the lowest, and on the 21st of August, 1900, a contract was entered into with it for the work. As soon as practicable thereafter, the work of construction was commenced, and the building, including steel cells and fixtures, was fully completed by April 1, 1901. The superintendent of construction, in submitting a final report as to the buildings erected under the contract, stated—

> Everything is finished in a workmanlike manner and by far excels anything previously built here. It is conceded by all that it is the best equipped wing in the West. The governor and board were here on the 25th ultimo. They expressed themselves as thoroughly satisfied with the wing.

Thereupon a committee, consisting of a representative of the State of Washington and two persons designated by the Secretary of the Interior, was appointed to inspect the work. The building was found to have been constructed in strict accordance with the specifications, was accepted from the contractor by the Department, and on the 31st day of May, 1901, formally turned over to the State of Washington.

On the 16th of May, 1901, in conformity with the requirements of the act of June 4, 1897 (30 Stat., 56), a deed was executed by the Secretary of the Interior, transferring to the State of Washington the 40

acres of land at Walla Walla, Wash., which had been originally purchased under the appropriation in the act of March 3, 1893 (27 Stat., 671), as a site for the penitentiary building.

PAN-AMERICAN EXPOSITION.

Under date of July 8, 1898, Congress passed a joint resolution regarding the holding of a Pan-American exposition in the year 1901 upon Cayuga Island, between the cities of Buffalo and Niagara Falls, in the State of New York, to illustrate the development of the Western Hemisphere during the nineteenth century. The total appropriation for the Government exhibit, exclusive of buildings, was $300,000.

Prof. Frank W. Clark, Department representative on the board of management of the Government exhibit, reports that the first tentative allotment to the Department of the Interior was fixed by the board at $30,000. This sum, however, by allotments to other Departments and for purposes carried out by the board as a unit, was subsequently reduced to the net sum of $26,123.53. On December 1, 1901, all unexpended balances credited to the several Departments will be consolidated into one common fund, and the separate allotments will then end.

The total floor space assigned to the Department of the Interior amounted to 7,000 square feet, on which four bureaus have their exhibits. These are the Patent Office, the Geological Survey, the Bureau of Indian Affairs, and the Bureau of Education. The General Land Office was also invited to exhibit and was offered 60 linear feet of wall space, 12 feet high, on which to display its maps, but the offer was declined. The Census Office also decided not to exhibit, on the ground that its material was not yet sufficiently complete. The Pension Office never exhibits, having nothing available to display.

The material of the four exhibiting bureaus was arranged in accordance with a definite and harmonious plan. The effect produced is that of a homogeneous exhibit of the Department itself without destroying the well-marked individuality attached to each bureau's exhibit.

In former expositions the Patent Office has chiefly exhibited many cases filled with motionless models, a display of little interest to the average visitor; for Buffalo, however, it secured the cooperation of several inventors, and has been able to show various machines in actual operation. Among such machines may be mentioned the telautograph, the electrograph, the linotype, the monotype, the voting machine, and the mutoscope. A variety of historical models are also shown, together with a large case of products displaying the many ramifications of the paper industry. Its space, therefore, is always crowded with spectators, and the display is remarkably interesting.

By the Geological Survey the usual articles are shown, such as relief models, minerals, rocks, and fossils, together with two relief maps, one of Porto Rico, the other of the Hawaiian Islands, prepared especially for the occasion. The four large windows of the Department space are decorated with photographic transparencies from the laboratory of the Survey, which always attract much attention. Its chief exhibit, however, is the display of map printing, a large lithographic press being in continuous operation, and a thousand copies daily are struck off of a map of the Niagara River from Buffalo to its mouth. On the back of the map a full descriptive text is printed, giving the geological history of the region. These maps are given the visitors as souvenirs, and are much in demand. Requests for them come from all parts of the country.

Under the Bureau of Indian Affairs are shown, with some aboriginal objects, a large series of specimens illustrating the work of the Indian schools. This collection is similar in character to those which have been displayed at previous expositions, but it is more perfect in detail and much finer in installation.

The Bureau of Education exhibits the usual range of school work, and also some material relating to Alaska, together with a fine collection of articles sent by the Hawaiian Government to illustrate education in the islands. Its one great novelty, however, the chief new departure in exhibition work, is its exhibit of the biograph and graphophone. Moving pictures, thrown by a lantern on the screen, represent manual training in the Washington high schools, various exercises at the Indian School at Carlisle, and drill at the United States Naval Academy. By the graphophone, recitations and school songs are reproduced, so that the educational exhibit has a vitality and interest which could never before be given to it.

THE MARITIME CANAL COMPANY OF NICARAGUA.

Section 6 of the act of Congress approved February 20, 1889, entitled "An act to incorporate the Maritime Canal Company of Nicaragua," provides that said company shall make a report of its operations on the first Monday in December in each year to the Secretary of the Interior.

An advance copy of the report of this corporation, showing its present status, has been received and is hereto appended, page 264, marked Exhibit H. The official copy, it is stated, will be forwarded to the Department in time for transmission to Congress on the date prescribed by law.

THE COLUMBIA RAILWAY COMPANY OF WASHINGTON, D. C.

The president reports, in pursuance of the requirements of section 16 of the act of May 24, 1870 (16 Stat. L., 132), that the capital stock of the company is $400,000; that the par value of the shares is $50. The number of shares subscribed for up to the 31st day of December, 1900, is 8,000, of which 7,989 shares are held by the Washington Traction and Electric Company.

The receipts from all sources during the year ended December 31, 1899, were $184,544.07, and the total disbursements for the same time were $156,614.33. It is stated that the receipts from all sources during the year ended December 31, 1900, were $217,904.61, and that the total disbursements during that period were $550,389.38. The report, however, affords no explanation as to the excess of disbursements over the receipts for the year.

The total amount of the funded debt is $1,000,000, the average rate of interest per annum thereon being 5 and 6 per cent. There is no floating debt.

The amount of dividends declared was $24,000. The length of road is 6.94 miles. The length of double track, including sidings, is 6.94 miles. Total number of passengers carried in cars during the year was 7,603,667. Average time consumed by cars over road was thirty-one minutes on different divisions. Two of the thirty-seven accidents occurring in 1900 resulted in the death of the persons injured.

HALL OF RECORDS.

In previous annual reports comment has been made on the lack of room available for the accommodation of the permanent records and files of the Department and its bureaus. Each year adds to the accumulation of important records requiring preservation, and in providing space therefor it is frequently necessary to seriously encroach upon room which is badly needed for clerical purposes. The remedy heretofore suggested, that of providing a special building for the accommodation of the surplus records and files of all the departments of the Government, is equally applicable at this time. I renew my previous recommendation that Congress make suitable appropriation at an early date for the construction of a hall of records.

Very respectfully,

ETHAN ALLEN HITCHCOCK,
Secretary.

The PRESIDENT.

PAPERS

ACCOMPANYING THE

REPORT OF THE SECRETARY OF THE INTERIOR.

REPORT OF THE COMMISSIONER OF THE GENERAL LAND OFFICE.

DEPARTMENT OF THE INTERIOR,
GENERAL LAND OFFICE,
Washington, D. C., August 31, 1901.

SIR: I have the honor to submit the following as the annual report of this office for the fiscal year ended June 30, 1901:

This report embraces tabulated statements showing the business done in the district land offices, 117 in number, with reports from the surveyors-general, numbering 19, giving particulars of operations in their respective districts during the fiscal year, and also a showing of business transacted by the various divisions of this Bureau and with it the history of the field service in depredations, surveys, and forestry work.

When in my last annual report I called attention to the remarkable showing made in the tabulated statements of work done in this office—of lands disposed of and cash received for that year—and which far exceeded the record for many years preceding, I confidently believed a maximum had been reached. The cash receipts were then $4,379,758, an increase of $1,309,621 over the previous year (1899), and an increase of $2,101,763 over that of the year 1898. The land disposals, it was shown, were 13,453,887 acres for that year (1900), as against 9,182,413 acres for the previous year (1899), or an increase exceeding 4,000,000 acres. Of homestead entries, 8,478,409 acres were shown in that report, as against 6,177,587 acres for the year before.

INCREASED FINAL HOMESTEADS.

The present report for the fiscal year just closed (1901) greatly surpasses the exhibit above recapitulated. There were 9,488 more final homestead entries made during the past year, which covered 1,180,528 more acres than for any one year since the passage of the homestead act (May 20, 1862), almost forty years ago; or nearly one-fourth as many final entries of homesteads and acres as in the entire nineteen years following that law.

INCREASED ORIGINAL HOMESTEADS.

The record of original homestead entries made by settlers on the public domain the past year is almost as great a surprise. These entries numbered 68,648 and covered 9,497,275 acres, an increase over the great year before of 7,378 entries, and of 1,018,866 acres.

TOTAL HOMESTEADS.

The original homestead entries, final homestead entries, and commuted homestead entries made during the last fiscal year aggregated 111,390 entries in all, and embraced 15,455,057.46 acres for actual bona fide homes to American settlers.

TOTAL LAND DISPOSALS.

The amount of land disposed of during the last year was 15,562,796.30 acres, an increase of 2,108,908.34 as compared with the aggregate of disposals for the fiscal year ended June 30, 1900, viz, 13,453,887.96 acres.[1]

TOTAL CASH RECEIPTS.

The cash receipts are equally astonishing, as they amount to nearly five millions of dollars ($4,972,160), surpassing the high-water mark of the former year by $592,402.69, and exceeding the total cash receipts of this office for the fiscal year 1897 by $2,884,229. The total cash receipts for that year being $2,087,931.

No single year within the past ten years has witnessed so large a sum received on disposals of public lands as during that just closed.

CASH FROM DEPREDATIONS.

Attention is especially invited to the cash receipts arising from depredations upon public lands, compromises, fines, etc., which for the past year aggregated $261,573.84, as against $236,035.25 for the previous year, or an increase of $25,538.59, thus indicating increased vigilance on the part of the special agency force.

A CASH SURPLUS OF $3,158,441.67.

Subtracting from the total cash receipts of the fiscal year the amount expended and contracted for in maintenance of the entire land and forest administration, there remains a net surplus in the Treasury from this source of $3,158,441.67.

SWAMP LANDS.

Special efforts are exerted by this office to finally close up the swamp-land claims which still remain of the different States, and which for many years have been a source of great contention. The Department

[1] These figures do not include final entries the area of which has been reported in previous years as original entries.

has been occasioned unceasing trouble and expense in adjusting the numerous doubtful claims which have been filed for recognition. Last year 215,963.86 acres were patented as against 98,097.36 the year before, being an increase of 117,866.50 acres. These were swamp lands in place. Swamp indemnity claims rejected last year embraced 192,900 acres as against 96,320 acres rejected the year previous, or an increase of rejected claims covering 96,580 acres.

LAND SURVEYS.

An excellent showing is also made in the increased acceptances of surveys of the public domain. In the past year these embraced 8,810,837 acres as against 7,567,282 acres the previous year, or an increase of about 16 per cent.

LAND PATENTS.

When proof is completed on an application for public land, whether it be mineral, agricultural, timber land, or a selection on the part of a State, or a corporation upon some grant, the demand is insistent that patent issue that title may be confirmed early in the claimant. Therefore strenuous efforts have been made to expedite the issuance of patents, and accordingly there were issued the past year 47,408 patents, as against 34,344 the previous year—an increase of 13,064.

In this connection it will also be interesting to note that in patents on railroad selections under grants by Congress there were 2,470,804.55 acres patented the past year, as against 1,277,572.68 acres the year previous, being an increase of 1,193,231.97 acres; and of wagon-road selections there were patented last year 165,547.18 acres, as against 61,501.52 acres of the previous year, an increase of 104,045.66 acres. On the other hand, there were 94,535.13 acres of railroad selections canceled during the year, as against 38,230.04 acres the year prior, and there were received selections covering 3,285,676.14 acres, as against selections for 1,871,814.74 received the previous year.

STATE SELECTIONS.

There were certified to the several States and Territories during the fiscal year ended June 30, 1901, lists of lands selected by them and approved by the Secretary of the Interior to the amount of 1,243,519.92 acres, showing an increase during the last fiscal year of 471,310.47 acres.

DECISIONS IN CONTEST CASES.

In the year just passed there were rendered 4,934 decisions in contest cases, appealed and unappealed, as against 3,347 for the previous year, an increase of 1,587 decisions.

MINERAL ENTRIES.

In mineral and coal entries approved there has been a satisfactory increase.

The mineral and mill-site patents issued during the year, 1,388 in number, embrace 2,772 mineral and mill-site claims and an area of 50,852.46 acres, an increase in area of 8,459.93 acres, although the

number of patents was less by 27 than the number last year. Thirty-five more coal patents were issued than for the preceding year, an increase of over 60 per cent, while the area embraced therein was 12,060.87 acres, against an area of 9,149.16 acres for the previous fiscal year.

RAILROAD LANDS.

The railroad lands division disposed of 2,272 entries during the year, as against 1,112 the year before, leaving pending July 1, 1901, 953 entries undisposed of, as against 2,403 pending July 1, 1900.

In docket cases, in the same division, there were entered 1,170 decisions, as against 463 the year before, a gain of 707.

INCREASED CORRESPONDENCE.

In almost as great a proportion has other business of the General Land Office kept in advance of the preceding prosperous year. The communications received aggregated 232,240 as against 191,254 for the year before, or an increase of 40,986; while the decisions and letters written numbered 173,412 as against 148,433 for the previous year, or an increase of 24,979.

ARREARAGE REDUCED.

A satisfactory showing is made in the reduction of arrearage of work in the larger divisions. The work is nearer up to date than it was one year ago.

ACREAGE OF PUBLIC DOMAIN.

As will be seen elsewhere in this report, the acreage of the public domain is accounted for as follows:

	Acres.
Unappropriated and unreserved	914,096,974
Reserved	147,356,902
Appropriated	748,085,964
Total acreage	1,809,539,840

This includes Alaska and excludes the recent insular possessions.

THE CLERICAL AND FIELD FORCE.

I think it may be asserted with confidence that in the public-land States and Territories no class of business with the general government comes so close to the great mass of the people as that which relates to the public-lands administration, except, perhaps, the postal service. It is therefore expected that all those performing duties under the direction of this office should be most constantly under the public surveillance, and in cases of dereliction that there should follow a quick and earnest protest.

The number of such officials in office and field and who contributed in greater or lesser degree to the work recited in this report aggregates 1,602, and most of them are distributed over the far distant and widely separated regions of the west, including Alaska. I must not omit to note also that this increased work has been accomplished without any additional clerical force. If, therefore, no special mention were made herein of this laborious and conscientious body of

men and women, an injustice would be done each one. I accordingly commend them in the strongest terms possible. The instances during the past year wherein charges were preferred for misconduct, I am glad to report, were rare.

Punctuality in attendance, studiousness in service, and uprightness in every duty imposed characterized the conduct of the office corps. The same deserving words are likewise extended to the large number of officials employed in surveyors-general and local land offices of the country, and to those in the field, whether upon the remote forest reserves, upon the public surveys, or as special agents investigating violations of the land laws. To the intelligent and industrious efforts of all these people is the public service indebted for the increased showing made in the public-lands administration during the past fiscal year.

DISPOSAL OF PUBLIC LANDS.

The following is a statement of the acreage disposed of during the fiscal year ended June 30, 1901:

CASH SALES.

	Acres.
Private entries	18,244.64
Public auction	65,597.94
Preemption entries	11,905.82
Timber and stone entries	396,445.61
Mineral-land entries	67,036.43
Desert-land entries (original)	686,382.56
Excess on homestead and other entries	20,051.01
Coal-land entries	10,955.91
Supplemental payments	80.80
Act March 3, 1887	12,354.51
Town sites	338.13
Abandoned military reservations	881.22
Soldiers' additional final entries	170.95
Excesses on Chippewa homesteads	77.59
Cash payments on homestead entries	8,512.72
Town lots	4.07
Sold under special acts	2,629.03
Total	1,301,668.94

MISCELLANEOUS.

	Acres.	
Homestead entries (original)	9,479,275.05	
Entries with—		
Military-bounty land warrants	675.96	
Agricultural-college scrip	320.00	
Private land scrip	440.00	
Valentine scrip	80.00	
Sioux half-breed scrip	1,922.43	
Chippewa scrip, Red Lake and Pembina	319.94	
Chippewa half-breed scrip	160.00	
State selections	1,432,462.28	
Railroad selections	2,833,329.68	
Wagon-road selections	153,671.14	
Indian allotments	10,808.37	
Small holdings	973.15	
Donation act	138.65	
Swamp lands patented	215,963.86	
Swamp land indemnity lands patented	3,239.83	
		14,151,780.34
Total area of public land entries and selections		15,453,449.28

INDIAN LANDS.

	Acres.	Acres.
Cherokee	184.88	
Klamath Indian reserve	2,023.22	
Southern Ute	7,009.98	
Ute	31,401.85	
Osage trust and diminished reserve	10,178.34	
Chippewa and Munsee	1,356.22	
Chippewa	38,094.89	
Sioux	1,317.94	
Flathead	2,245.09	
Otoe and Missouria	11,469.62	
Ponca	17.90	
Omaha	2,674.25	
Colville Indian reserve	1,257.58	
Uintah and White River reserve	115.26	
		109,347.02
Grand total		15,562,796.30

RECAPITULATION.

Area sold for cash	1,301,668.94
Area miscellaneous entries	14,151,780.34
Area Indian lands	109,347.02
Aggregate	15,562,796.30

Showing an increase of 2,108,908.34 acres as compared with the aggregate of disposals for the fiscal year ended June 30, 1900.

The foregoing statement does not include the following entries, the areas of which have been previously reported in the original entries of the respective classes:

	Acres.
Private entry (cash substitution)	160.00
Preemption entry (cash substitution)	160.00
Final desert-land entries	152,160.34
Commuted homestead, section 2301, Revised Statutes	629,002.32
Commuted homesteads under sundry other acts	87,659.33
Timber-culture entries under act March 3, 1891	1,649.01
Act March 3, 1887	1,198.57
Abandoned military reservations	320.00
Act August 6, 1854	80.00
Cash substitution	159.92
Lake Traverse lands	54.65
Act August 23, 1894	80.00
Cash payment on final homestead	6.93
Final homestead entries	5,241,120.76
Final timber-culture entries	395,488.84
Military bounty land warrants	3,944.35
Agricultural college scrip	160.00
Private land scrip	1,138.42
Commuted homesteads—Indian lands	21,072.39
Final desert-land entries—Indian lands	4,250.85
Total	6,539,866.68

The filings and fees thereon are stated in the annexed table:

	Number.	Fees.
Preemption	493	$1,412
Homestead	475	1,053
Coal	1,654	4,884
Town site	1	3
Reservoir	2,251	5,844
Mineral applications	2,038	20,380
Timber and stone applications	3,075	30,750
	9,992	64,326
Mineral adverse claims	352	3,520
Total	10,344	67,846

Miscellaneous fees as follows:

To reducing testimony to writing, cancellation fees, etc	$95,474.51

CASH RECEIPTS.

The following is a statement of the cash receipts of the office from various sources during the fiscal year ended June 30, 1901:

Sales of land at private entry	$24,061.51
Sales of land at public auction	92,863.35
Sales of land by preemption entry	15,496.32
Sales of timber and stone land	992,144.93
Sales of mineral land	271,321.47
Sales of desert land (original)	171,556.05
For final desert land	152,819.99
For commuted homesteads (sec. 2301, R. S.)	820,782.16
For commuted homesteads under sundry other acts	117,948.50
For excesses on homesteads and other entries	27,861.53
For timber-culture entries commuted under act March 3, 1891	2,061.26
Sales of coal land	207,933.00
For supplemental payments	121.54
Under act March 3, 1887	24,421.76
Sales of town sites	802.01
Sales of abandoned military reservations	2,583.43
For competitive bids	164.00
Sales of land under special acts	3,132.54
Soldiers' additional final entries	641.06
Excesses on Chippewa homesteads	96.94
Cash substitution	199.90
For Lake Traverse lands	136.63
Interest payments on commuted homesteads	3,766.17
Cash payments on homestead entries	32,777.68
Cash payment on final homestead	12.13
Under act August 23, 1894	100.00
Sales of town lots	737.00
Total	$2,966,542.86

FEES AND COMMISSIONS.

For homestead entries, original and final	$1,108,000.14	
For timber-culture entries (final)	10,364.00	
For entries with—		
Military bounty land warrants	116.00	
Agricultural college scrip	8.00	
Private land scrip	1.00	
Valentine scrip	2.00	
For commuted homesteads (Ponca lands)	146.00	
For final commissions on Indian lands	43.29	
For Sioux final cash entries	150.35	
For State selections	17,444.00	
For railroad selections	39,366.00	
For wagon-road selections	1,928.00	
For lands entered under the donation act	5.00	
For preemption, coal, reservoir, and other filings	64,326.00	
For mineral adverse claims	3,520.00	
For cancellation notices	2,734.00	
For reducing testimony to writing	92,740.51	
		$1,340,894.29
Total receipts from disposal of public land		4,307,437.15
Total receipts from disposal of Indian land		585,661.27
Total receipts from depredations on public land		36,471.83
Total receipts from sales of timber under acts March 3, 1891, and June 4, 1897		25,305.95
Total receipts from sales of Government property (old office furniture, etc.)		597.78
Total receipts for furnishing copies of records and plats		16,686.81
Grand total		$4,972,160.79

The total cash receipts for the fiscal year ended June 30, 1900, were $4,379,758.10, showing an increase in receipts for the year ended June 30, 1901, as compared with the preceding fiscal year, of $592,402.69.

The total expenses of district land offices, for salaries and commissions of registers and receivers, incidental expenses, and expenses of depositing public moneys, during the fiscal year ended June 30, 1901, were $773,617.99, an increase of $46,036.01, as compared with the fiscal year ended June 30, 1900.

Number and class of final and original entries and selections made during the fiscal year compared with the year

Class of entry.	Number of entries.	Number of acres.	Cash receipts. Sales.	Cash receipts. Fees and commissions.
FINAL ENTRIES.				
Private	265	160 18,244.64	$24,061.51	
Public auction	1,478	65,597.94	92,863.35	
Preemption	81	160 11,905.82	15,496.32	
Timber and stone	3,031	396,445.61	992,144.93	
Mineral	1,891	67,036.43	271,321.47	
Desert land	911	152,160.34	152,819.99	
Commuted homesteads (sec. 2301, Rev. Stat.)	4,538	629,002.32	820,782.16	
Commuted homesteads (act June 15, 1880)				
Timber culture, commuted under act Mar. 3, 1891	12	1,649.01	2,061.26	
Excesses on homesteads and other entries	5,239	20,128.60	27,958.47	
Coal lands	84	10,955.91	207,933.00	
Town sites	6	338.13	802.01	
Supplemental payments	5	80.80	121.54	
Abandoned military reservations	14	1,201.22	2,589.43	
Competitive bids			164.00	
Town lots	25	4.07	737.00	
Cash substitution	1	159.92	199.90	
Commuted homesteads under special acts	636	87,659.33	117,948.50	
Cash for final homesteads	4	177.88	653.19	
Ceded Indian lands	66	8,567.37	32,914.31	
Cash payments on scrip locations				
Under sundry acts	155	16,342.11	27,654.30	
Church site				
Homestead	37,568	5 241,120.76		$163,788.31
Timber culture	2,591	395,488.84		10,364.00
Military bounty land warrants	33	4,620.31		116.00
Scrip locations under the several acts	34	4,540.79		11.00
Indian allotments	90	10,808.37		
Small holdings	40	973.15		
Commissions on final and commuted homesteads				339.64
Swamp land and swamp indemnity land		219,203.69		
Donation claims	1	138.65		5.00
Interest payments			3,766.17	
Fees erroneously collected				
	58,799	7,364,872.01	2,794,986.81	174,623.95
Indian lands	1,220	25,323.24 109,347.02	585,661.27	
Total	60,019	7,499,542.27	3,380,648.08	174,623.95
ORIGINAL ENTRIES.				
Desert land	3,957	686,382.56	171,556.05	
Homestead	68,648	9,497,275.05		944,211.83
Timber culture				
Total	72,605	10,183,657.61	171,556.05	944,211.83
RAILROAD, STATE, AND WAGON-ROAD SELECTIONS.				
Railroad	19,683	2,833,329.68		39,366.00
State under the several acts	8,720	1,432,462.28		17,444.00
Wagon-road	964	153,671.14		1,928.00
Total	29,367	4,419,463.10		58,738.00
FILING AND MISCELLANEOUS FEES.				
Filing fees and mineral adverse claims	10,344			67,846.00
Fees for reducing testimony to writing, etc				95,474.51
Total	10,344			163,320.51
RECAPITULATION BY TOTALS.				
Final entries	60,019	7,499,542.27	3,380,648.08	174,623.95
Original entries	72,605	10,183,657.61	171,556.05	944,211.83
Railroad, State, and wagon-road selections	29,367	4,419,463.10		58,738.00
Filing and miscellaneous fees	10,344			163,320.51
Total	172,335	22,102,662.98	3,552,204.13	1,340,894.29
Deduct totals of decrease				
Net total of increase				

Entries originated and completed within the year embrace 959,675.59 acres; entries originating in acres; total acreage of final entries 7,499,542.27; net increase in number of final entries, 12,641; increase 1,114,452.65.

ended June 30, 1901; also the amount of cash for same, and increase or decrease as ended June 30, 1900.

Increase as compared with 1900.				Decrease as compared with 1900.			
Number of entries.	Number of acres.	Cash sales.	Fees and commissions.	Number of entries.	Number of acres.	Cash sales.	Fees and commissions.
				568	65,581.23	$81,501.99	
893	34,094.32	$38,699.54					
				39	4,203.40	5,152.59	
646	96,426.55	242,099.34					
273	11,410.17	61,047.14					
	13,708.14	14,365.33		1			
1,778	254,189.46	323,267.11					
				1	160	186.00	
				10	995.68	1,244.71	
963	6,031.31	7,896.75					
2					446	2,405.70	
				7	482.27	785.15	
	20.16			1		156.65	
				139	7,153.62	32,471.77	
		34.00					
	1.27			3		251.00	
	119.92	99.90					
				615	89,933.46	242,231.86	
				1,650	248,165.37	268,998.03	
		18,070.42		54	4,921.98		
				2	99.45	124.31	
				131	49,341.87	31,013.03	
				1	2.00	2.50	
12,282	1,763,308.05		$46,296.13				
				1,004	153,292.84		$4,016.00
5	1,231.95		24.00				
			8.00	52	3,489.82		
				15	525.74		
				36	1,888.26		
							428.65
	119,930.70						
				3	410.06		20.00
		3,766.17					
							4.00
16,842	2,300,472.00	709,345.70	46,328.13	4,312	631,186.05	666,525.29	4,468.65
107	72,247.17	345,891.88					
16,949	2,372,719.17	1,055,237.58	46,328.13	4,312	631,186.05	666,525.29	4,468.65
478	96,226.82	23,990.62					
7,378	1,018,865.83		112,588.50				
				4	640.00		56.00
7,856	1,115,092.65	23,990.62	112,588.50	4	640.00		56.00
7,481	901,189.91		14,959.00				
				1,529	190,253.98		3,041.00
603	96,487.51		1,206.00				
8,084	997,677.42		16,165.00	1,529	190,253.98		3,051.40
			6,391.00	1,207			
			9,887.28				
			16,278.28	1,207			
16,949	2,372,719.17	1,055,237.58	46,328.13	4,312	631,186.05	666,525.29	4,468.65
7,856	1,115,092.65	23,990.62	112,588.50	4	640.00		56.00
8,084	997,677.42		16,165.00	1,529	190,253.98		3,051.00
			16,278.28	1,207			
32,889	4,485,489.24	1,079,228.20	191,359.91	7,052	822,080.03	666,525.29	7,575.65
7,052	822,080.03	666,525.29	7,575.65				
25,837	3,663,409.21	412,702.91	183,784.26				

former years and heretofore so reported, but completed during the fiscal year 1901, embrace 6,589,866.63 in area of final entries, 1,742,081.83 acres. Net increase of original entries, 7,852; increase of area,

ISSUE OF PATENTS FOR LANDS DISPOSED OF.

AGRICULTURAL PATENTS ISSUED.

Patents of the class denominated agricultural were issued during the fiscal year ended June 30, 1901, to the number of 42,237, containing, approximately, 6,757,920 acres, made up of the following, viz:

Cash patents	10,147
Homestead patents	29,083
Timber-culture patents	2,698
Forest-reserve patents	207
Military bounty land patents	49
Agricultural college scrip patents	3
Sioux half-breed scrip patents	26
Supreme court scrip patents	8
Surveyor-general's scrip patents	10
Red Lake and Pembina scrip patents	2
Valentine scrip patents	2
Choctaw scrip patent	1
Chippewa scrip patent	1
Total	42,237

Approximating 6,757,920 acres of land patented.

The above statement shows an increase in the number of this class of patents issued during the last fiscal year of 12,689 over the number issued during the fiscal year ended June 30, 1900, and in the approximate acreage an increase of 2,030,240 acres.

MINERAL PATENTS.

Of mineral and mill site patents 1,388 were issued, as against 1,415 for the fiscal year ended June 30, 1900, a decrease of 27. Of coal patents 104 were issued, as against 69 for the preceding year, and including an area of 12,060.87 acres, as against an area of 9,149.16 acres, an increase of 35 patents and 2,911.71 acres.

In the following table are shown the States and Territories in which mineral and mill site and coal patents were issued:

States and Territories.	Coal patents.	Area.	Mineral and mill site patents.	Mineral and mill site claims.	Mineral area.
		Acres.			*Acres.*
Alabama	1	159.58			
Alaska			8	21	291.834
Arizona			62	249	3,578.945
Arkansas			51	73	8,469.180
California	1	143.10	112	173	6,497.084
Colorado	36	3,239.97	709	1,304	15,791.815
Idaho			75	148	2,630.111
Montana	8	200	115	180	4,266.238
Nevada	1	160	31	60	958.038
New Mexico	12	840	20	37	707.639
Oregon	1	170.70	21	38	811.992
South Dakota			42	194	2,406.800
Utah	15	3,372.76	108	233	2,725.099
Washington	7	1,031.52	30	52	873.326
Wyoming	22	2,743.24	4	10	844.357
Total	104	12,060.87	1,388	2,772	50,852.458

The mineral and mill-site patents issued, 1,388 in number, as shown above, embraced 2,772 mineral and mill-site claims and an area of 50,852.458 acres. These figures show a reduction from last year of 27 in number of mineral patents issued, but an increase in area of 8,459.934 acres. The decrease of 27 in the number of mineral patents issued was caused by want of sufficient clerical force to prepare the patents, as 229 more mineral entries were approved for patenting than during the preceding year, and 473 approved mineral entries await patenting, as against 42 for last year.

As shown by the same table, 35 more coal patents were issued than for the preceding year, an increase of over 60 per cent, and a gradual increase from 32 in 1897 to 104 in 1901. Colorado, New Mexico, Utah, and Wyoming have contributed largely to this increase.

The increase of 8,459.93 acres in mineral lands patented falls principally in Arizona 1,676 acres, Arkansas 6,010.81 acres, and Colorado 5,263.63 acres. In a few of the States there is a slight decrease.

RAILROAD AND WAGON-ROAD LANDS PATENTED.

During the fiscal year ended June 30, 1901, lands have been certified or patented on account of railroad and wagon-road grants as follows:

Name of road.	Where located.	Number of acres.
Florida Central and Peninsular	Florida	1,523.40
Pensacola and Georgia	do	40.00
Chicago, Rock Island and Pacific	Iowa	40.00
Cedar Rapids and Missouri River	do	720.14
Chicago, Milwaukee and St. Paul	do	403.65
St. Paul, Minneapolis and Manitoba (formerly St. Vincent extension of the St. Paul and Pacific).	Minnesota	8,294.18
Hastings and Dakota	do	6,364.88
Missouri, Kansas and Texas	Kansas	160.00
Union Pacific (proper)	Nebraska	59,952.96
Do	Colorado	7,977.43
Do	Wyoming	287,824.19
Do	Utah	17,432.50
Union Pacific (Kansas Division)	Kansas	584,678.27
Do	Colorado	24,082.51
Union Pacific (Denver Pacific)	do	4,125.27
Central Branch Union Pacific	Kansas	157.10
Central Pacific (proper)	California	188,380.96
Do	Utah	142,818.49
Do	Nevada	56,885.43
Central Pacific (Western Pacific)	California	142.65
Central Pacific (California and Oregon)	do	46,555.39
Northern Pacific	Minnesota	17,583.86
Do	Wisconsin	2,630.80
Do	North Dakota	187,850.27
Do	Montana	198,245.82
Do	Idaho	43,355.31
Do	Washington	352,878.43
Southern Pacific	California	62,210.37
Southern Pacific (branch line)	do	34,423.71
Atlantic and Pacific	Arizona	121,882.15
Sioux City and Pacific (now Missouri Valley Land Co.)	Nebraska	160.00
New Orleans Pacific (formerly New Orleans, Baton Rouge and Vicksburg).	Louisiana	2,820.34
Oregon and California	Oregon	8,204.09
Total		2,470,804.55
WAGON ROADS.		
Willamette Valley and Cascade Mountains	Oregon	2,320.00
Dalles Military Road	do	163,227.18
Total of wagon roads		165,547.18

As against an area of railroad lands patented the preceding year of 1,277,572.68 acres, this statement shows an increase of 1,193,231.87 acres, and an increase over the year 1899 (when 504,651.23 acres were patented), of 1,966,153.32 acres. The increase in wagon road lands patented over the year 1900 was 104,045.66 acres, making the total increase of railroad and wagon road lands patented over the preceding year 1,297,277.53 acres.

SWAMP-LAND PATENTS.

The following statement shows the acreage of swamp and overflowed lands and swamp-land indemnity lands patented during the fiscal year ended June 30, 1901; also the acreage reported to this office as claims of the several States to which the swamp-land grants and the indemnity laws have been extended, and the acreage approved by the Secretary of the Interior during the same period. There is also added the total acreage certified under the grant of March 2, 1849, and patented under the grant of September 28, 1850, from the date of the passage of the earliest of the grants to June 30, 1901.

Swamp lands and swamp-land indemnity lands selected, approved, and patented during the fiscal year ended June 30, 1901; also the total number of acres patented since the dates of the grants.

State.	Swamp lands.			Swamp-land indemnity lands.			Total patented since dates of grants.
	Selected.	Approved.	Patented.	Selected.	Approved.	Patented.	
	Acres.	*Acres.*	*Acres.*	*Acres.*	*Acres..*	*Acres.*	*Acres.*
Alabama		3,772.83	3,772.83				437,055.35
Arkansas			165.94				7,682,880.17
California	106,137.92	17,982.39	114,977.30				1,869,904.64
Florida	1,564.28	853.58	1,534.00				17,162,798.52
Illinois		160.00	160.00				1,459,139.83
Indiana							1,258,990.93
Iowa	1,029.90	80.00	80.00				1,190,461.01
Louisiana (act of 1849)							8,733,088.57
Louisiana (act of 1850)	686.81	32,143.62	43,678.02		520.94	2,479.83	399,980.47
Michigan		3.65	1,645.14				5,678,476.64
Minnesota	28,925.68	43,895.99	46,835.41				3,873,511.44
Mississippi		400.17	400.17				3,322,303.47
Missouri						760.00	3,424,473.97
Ohio							26,206.95
Oregon		1,233.37	2,555.05				241,076.90
Wisconsin		160.00	160.00				3,355,415.22
Total	138,344.59	100,685.60	215,963.86		520.94	3,239.83	60,115,714.08

It will be seen from the above table that 215,963.86 acres of swamp land in place and 3,239.83 acres of arable land, located with swamp-land indemnity certificates, making a total of 219,203.69 acres, were patented under the swamp-land laws during the fiscal year. The patents issued under these laws in the previous fiscal year amounted to 98,097.36 acres of swamp lands in place and 1,175.63 acres of swamp-land indemnity lands, making a total of 99,272.99 acres. Thus there were patented under the swamp-land laws during the last fiscal year 119,930.70 acres more than in the previous fiscal year.

INDIAN AND MISCELLANEOUS PATENTS.

The following statement shows the area of lands embraced in Indian and miscellaneous patents issued during the fiscal year ended June 30, 1901, by States and Territories, viz:

State or Territory.	Acres.	State or Territory.	Acres.
Alabama	1,654.77	New Mexico	105,565.02
Arizona	17,355.86	North Dakota	80,340.04
Florida	2,000	Oklahoma	68,935
Kansas	2,400	Washington	32,591.13
Louisiana	10,265.16		
Minnesota	126,785.47	Total	448,536.40
Mississippi	643.95		

This is an increase in area, as compared with the former fiscal year, of 106,005.14 acres, the area patented during said year having been 342,531.26 acres.

CERTIFICATION OF LANDS GRANTED FOR EDUCATIONAL AND OTHER PURPOSES.

Lists of lands selected by the several States and Territories and approved by the Secretary of the Interior were duly certified during the fiscal year ended June 30, 1901, to the amount of 1,243,519.92 acres.

The following is a table of the lists certified:

State or Territory.	Land district.	Date of approval.	No. of list.	Grant.		Amount.
				Authority of law.	Purpose for which granted.	
						Acres.
Alabama	Huntsville	July 21, 1900	2	Act of Feb. 18, 1899.	Industrial school for girls.	2,232.71
California	San Francisco	July 20, 1900	66	Sec. 7, act Mar. 3, 1853.	School-land indemnity.	5,448.48
Do	do	Jan. 23, 1901	28	Sec. 8, act Sept. 4, 1841.	Internal improvements.	960.00
Do	Marysville	Apr. 15, 1901	16	Sec. 7, act Mar. 3, 1853.	School-land indemnity.	972.33
Do	Visalia	June 10, 1901	12	do	do	1,678.74
Do	Sacramento	Jan. 16, 1901	12	do	do	2,881.12
Do	Los Angeles	Apr. 13, 1901	27	do	do	1,745.65
Do	Susanville	Apr. 15, 1901	10	do	do	3,979.66
Colorado	Durango	Sept. 14, 1900	3	Sec. 3, act Apr. 2, 1884.	Agricultural college.	40.00
Do	Pueblo	July 7, 1900	5	do	do	1,594.45
Do	Hugo	Sept. 7, 1900	1	do	do	160.00
Do	Durango	Oct. 23, 1900	1	Sec. 7, act Mar. 3, 1875.	School-land indemnity.	12,722.67
Florida	Gainesville	July 31, 1900	6	Sec. 8, act Sept. 4, 1841.	Internal improvements.	2,158.39
Do	do	Oct. 4, 1900	22	Sec. 1, act Mar. 3, 1845.	School-land indemnity.	167.80
Do	do	Jan. 9, 1901	23	do	do	2,524.37
Do	do	Mar. 9, 1901	24	do	do	11,002.40
Idaho	Lewiston	Nov. 9, 1900	11	Sec. 11, act June 3, 1890.	State university	4,480.00
Do	do	do	10	Sec. 10, act June 3, 1890.	Agricultural college.	1,120.00
Do	do	Dec. 31, 1900	10	Sec. 11, act June 3, 1890.	Insane asylum	3,210.88
Do	do	Nov. 2, 1900	9	do	Normal school	6,551.26
Louisiana	New Orleans	June 3, 1901	26	Act May 20, 1826	School-land indemnity.	1,086.57
Do	Natchitoches	do	3	do	do	1,662.86

State or Territory.	Land district.	Date of approval.	No. of list.	Grant.		Amount.
				Authority of law.	Purpose for which granted.	
						Acres.
Montana	Helena	Aug. 13, 1900	6	Sec. 17, act Feb. 22, 1889.	Reform school	15,211.21
Do	do	do	9	do	Normal school	20,641.75
Do	do	Aug. 25, 1900	7	do	Deaf and dumb asylum.	16,204.09
Do	do	Jan. 14, 1901	10	do	Public buildings	22,039.29
Do	Kalispel	Feb. 25, 1901	8	do	School of mines	4,292.98
Do	Missoula	Feb. 15, 1901	4	do	Agricultural college.	4,680.00
Do	Lewistown	Feb. 25, 1901	10	do	Normal school	1,120.00
Do	Bozeman	Feb. 1, 1901	8	do	Deaf and dumb asylum.	2,930.80
Do	Helena	Mar. 1, 1901	5	do	Agricultural college.	19,786.03
Do	Missoula	Mar. 21, 1901	11	do	Public buildings	2,640.00
Do	Helena	do	9	do	School of mines	14,078.00
Do	Bozeman	Apr. 12, 1901	7	do	Reform school	3,005.36
Do	Missoula	May 10, 1901	1	do	Public buildings	1,530.96
Do	Lewistown	Sept. 8, 1900	1	Sec. 10, act Feb. 22, 1889.	School-land indemnity.	11,252.82
Do	do	Feb. 15, 1901	2	do	do	61,691.90
Do	Helena	Jan. 2, 1901	2	do	do	54,503.83
Do	do	do	3	do	do	28,980.02
Do	do	Feb. 5, 1901	4	do	do	34,367.60
Do	do	Mar. 9, 1901	5	do	do	38,525.35
Do	Miles City	Jan. 2, 1901	1	do	do	1,679.60
Do	Bozeman	Jan. 9, 1901	1	do	do	4,621.72
Do	do	Apr. 18, 1901	2	do	do	2,183.69
Do	Missoula	Feb. 25, 1901	1	do	do	6,320.40
Nebraska	O'Neill	Mar. 1, 1901	3	Act Apr. 19, 1864	do	1,599.06
Nevada	Carson City	July 27, 1900	31	Sec. 1, act June 16, 1880.	Support of common schools.	30,314.50
Do	do	Oct. 4, 1900	32	do	do	22,290.73
Do	do	Apr. 12, 1901	33	do	do	8,201.19
Do	do	May 17, 1901	34	do	do	2,710.56
New Mexico	Las Cruces	Aug. 13, 1900	1	Act June 21, 1898	Insane asylum	15,592.09
Do	do	do	1	do	Miners' hospital	16,356.15
Do	do	do	1	do	Reform school	16,470.73
Do	do	do	1	do	School of mines	16,183.72
Do	do	do	1	do	Penitentiary	15,260.34
Do	do	do	1	do	Military institute	16,473.63
Do	do	do	1	do	Reservoirs	49,605.06
Do	do	do	1	do	Deaf and dumb asylum.	15,917.44
Do	do	Aug. 25, 1900	1	do	Normal school	32,617.54
Do	Santa Fe	Dec. 17, 1900	2	do	Institute for the blind.	2,780.00
Do	do	do	2	do	Miners' hospital	2,800.00
Do	do	do	2	do	Military institute	2,880.00
Do	do	Dec. 18, 1900	2	do	Insane asylum	3,071.48
Do	do	do	2	do	Reform school	2,880.40
Do	do	do	2	do	Penitentiary	2,720.00
Do	do	do	2	do	Deaf and dumb asylum.	2,877.36
Do	do	do	2	do	Normal school	5,440.00
Do	do	Jan. 14, 1901	2	do	School of mines	2,878.88
Do	do	Apr. 13, 1901	1	do	University	6,400.00
Do	do	do	1	do	Agricultural college.	5,704.24
Do	Las Cruces	June 21, 1901	3	do	School of mines	1,970.92
Do	do	do	3	do	Normal school	3,960.00
Do	do	do	3	do	Miners' hospital	1,920.00
Do	do	do	3	do	Deaf and dumb asylum.	1,880.00
Do	do	June 22, 1901	2	do	Agricultural college.	6,253.21
Do	do	do	3	do	Insane asylum	2,044.20
Do	do	do	3	do	Reform school	1,920.00
Do	do	do	3	do	Institute for the blind.	1,923.26
Do	do	do	3	do	Military institute	1,912.26
Do	do	do	3	do	Penitentiary	2,400.00
South Dakota	Huron	Feb. 20, 1901	13	Sec. 17, act Feb. 22, 1889.	Charitable, educational, etc., institutions.	4,510.95
Do	do	Apr. 13, 1901	14	do	do	160.00
Do	do	Feb. 20, 1901	6	do	University	3,054.83
Do	do	Apr. 13, 1901	7	do	do	40.16
Do	do	Feb. 20, 1901	6	do	School of mines	160.36

State or Territory.	Land district.	Date of approval.	No. of list.	Grant.		Amount.
				Authority of law.	Purpose for which granted.	
						Acres.
Utah	Salt Lake City.	Sept. 6, 1900	3	Sec. 12, act July 16, 1894.	School of mines	21,811.67
Do	do	Nov. 12, 1900	4	do	do	10,534.29
Do	do	June 22, 1901	5	do	do	11,166.59
Do	do	Sept. 7, 1900	3	Sec. 8, act July 16, 1894.	Agricultural college.	27,420.14
Do	do	Sept. 8, 1900	4	do	do	19,696.03
Do	do	June 22, 1901	5	do	do	44,037.18
Do	do	Sept. 7, 1900	2	Sec. 12, act July 16, 1894.	Miners' hospital	13,311.31
Do	do	Sept. 15, 1900	3	Sec. 7, act July 16, 1894.	Public buildings	6,378.94
Do	do	do	3	Sec. 8, act July 16, 1894.	University	32,098.66
Do	do	Sept. 8, 1900	3	Sec. 12, act July 16, 1894.	Reform school	14,223.86
Do	do	do	4	do	Insane asylum	12,971.46
Do	do	Jan. 17, 1901	3	do	Institute for the blind.	33,288.19
Do	do	Mar. 21, 1901	2	do	Normal school	32,145.71
Do	do	June 21, 1901	7	do	Reservoirs	46,377.85
Do	do	Nov. 19, 1900	4	do	Deaf and dumb asylum.	15,156.84
Washington	Seattle	July 25, 1900	11	Sec. 17, act Feb. 22, 1889.	Normal school	2,868.53
Do	North Yakima.	do	16	do	State charitable, educational, etc., institutions.	4,866.64
Do	Seattle	July 31, 1900	6	Sec. 12, act Feb. 22, 1889.	Public buildings	3,284.48
Do	do	Feb. 13, 1901	7	do	do	3,841.71
Do	Vancouver	Jan. 5, 1901	15	Sec. 17, act Feb. 22, 1889.	do	9,990.40
Do	do	May 9, 1901	16	do	do	1,760.00
Do	do	Feb. 26, 1901	8	Sec. 12, act Feb. 22, 1889.	Public buildings at capital.	1,760.00
Do	do	Apr. 13, 1901	12	Sec. 13, act Feb. 22, 1889.	Agricultural college.	1,765.14
Do	Seattle	Oct. 4, 1900	8	Sec. 10, act Feb. 22, 1889.	School-land indemnity.	760.00
Wyoming	Cheyenne	July 24, 1900	17	Sec. 11, act July 10, 1890.	Charitable, educational, etc., institutions.	1,425.88
Do	Douglas	Aug. 15, 1900	18	do	do	2,667.79
Do	Lander	Dec. 14, 1900	19	do	do	1,262.52
Do	Buffalo	Apr. 15, 1901	20	do	do	1,280.14
Do	Sundance	June 28, 1901	21	do	do	5,351.14
Do	Buffalo	Aug. 13, 1900	4	do	Public buildings	634.23
Do	Sundance	Apr. 15, 1901	5	do	do	800.10
Do	Buffalo	Sept. 6, 1900	10	do	Agricultural college.	16,710.23
Do	Douglas	do	11	do	do	1,442.60
Do	Cheyenne	Sept. 28, 1900	12	do	do	962.71
Do	Sundance	Mar. 13, 1901	13	do	do	1,914.08
Do	Evanston	Sept. 6, 1900	2	do	Miners' hospital	480.00
Do	Buffalo	Dec. 14, 1900	6	do	Deaf and dumb asylum.	240.00
Do	Cheyenne	Mar. 13, 1901	7	do	do	803.20
Do	Douglas	Apr. 12, 1901	8	do	do	634.60
Do	Cheyenne	July 5, 1900	2	Sec. 4, act July 10, 1890.	School-land indemnity.	8,491.34
Do	do	Jan. 5, 1901	3	do	do	16,926.65
Do	Douglas	Nov. 21, 1900	2	do	do	10,229.12
Do	Evanston	Jan. 5, 1901	2	do	do	8,879.03
Do	Lander	do	2	do	do	7,955.92
Do	do	Apr. 13, 1901	3	do	do	4,000.00
Total						1,243,519.92

The foregoing statement shows that 1,243,519.92 acres were approved and certified during the fiscal year. The aggregate of lands of the same class certified during the fiscal year ended June 30, 1900, was 772,209.45 acres, showing an increase during the last fiscal year of 471,310.47 acres.

In addition to this selections, aggregating 73,767.76 acres, were canceled during the year.

Recapitulation of areas embraced in patents as stated in the foregoing.

Patents.	1900.	1901.	Increase.
	Acres.	*Acres.*	*Acres.*
Agricultural	4,727,680.00	6,757,920.00	2,030,240.00
Coal	9,149.16	12,060.87	2,911.71
Mineral and mill site	42,392.52	50,852.45	8,459.93
Railroad	1,277,572.68	2,470,804.55	1,193,231.87
Wagon road	61,501.52	165,547.18	104,045.66
Swamp	98,097.36	215,963.86	117,866.50
Swamp indemnity	1,175.63	3,239.83	2,064.20
Indian and miscellaneous	342,531.26	448,536.40	106,005.14
School selections	772,209.45	1,243,519.92	471,310.47
Total	7,332,309.58	11,368,445.06	4,036,135.48

BOUNTY-LAND BUSINESS.

The following is a statement of the number of acres represented by military bounty-land warrants located in the several land States and Territories for the year ended June 30, 1901, or not heretofore reported, which warrants were issued under the acts of 1847, 1850, 1852, and 1855. The aggregate number of acres is computed at the rate of $1.25 per acre. It does not show the exact area of the lands located with the warrants:

	Acres.		Acres.
Alabama	160	Missouri	280
Arkansas	80	Montana	440
California	2,240	North Dakota	2,040
Colorado	440	Washington	280
Louisiana	320	Oregon	560
Minnesota	2,120		
		Total	8,960

Summary of warrants.

Denomination of warrants.	40 acres.	80 acres.	120 acres.	160 acres.	Total.
Act of 1847	2			2	400
Act of 1850	7	2		3	920
Act of 1852	1				40
Act of 1855		7	16	32	7,600
Total	10	9	16	37	8,960

VACANT PUBLIC LANDS, WITH AREA RESERVED AND APPROPRIATED.

Reports have been received from the various land offices giving an approximate estimate of the quantity of vacant public lands, together with the area reserved and appropriated, in the several land districts at the close of the fiscal year ended June 30, 1901, of which the following is presented as a recapitulation:

State or Territory.	Area unappropriated and unreserved.			Area reserved.	Area appropriated.
	Surveyed.	Unsurveyed.	Total.		
	Acres.	*Acres.*	*Acres.*	*Acres.*	*Acres.*
Alabama	312,630		312,630	52,820	32,292,470
Alaska	(1)	367,983,506	367,983,506	[2]120,174	(1)
Arizona	11,615,248	37,155,806	48,771,054	18,285,008	5,736,258
Arkansas	3,224,128		3,224,128	2,560	30,316,992
California	34,052,596	7,996,412	42,049,008	16,063,670	41,857,242
Colorado	34,719,759	4,396,055	39,115,814	5,694,161	21,538,185
Florida	1,299,704	160,070	1,459,774	19,259	33,593,607
Idaho	11,680,089	30,795,087	42,475,176	1,747,311	9,070,953
Illinois					35,842,560
Indiana					22,950,400
Indian Territory				19,658,880	
Iowa					35,646,080
Kansas	1,055,315		1,055,315	987,575	50,309,530
Louisiana	254,317	65,018	319,335	1,468,434	27,267,591
Michigan	462,157		462,157	87,746	36,269,297
Minnesota	1,967,285	2,172,908	4,140,193	4,958,508	42,119,379
Mississippi	195,980		195,980		29,489,140
Missouri	281,727		281,727		43,514,113
Montana	19,188,446	46,664,861	65,803,307	12,347,531	15,442,762
Nebraska	9,926,670		9,926,670	69,642	39,140,968
Nevada	29,667,377	31,654,848	61,322,225	5,983,409	3,031,006
New Mexico	41,108,508	14,480,616	55,589,124	6,385,181	16,454,495
North Dakota	11,973,758	4,982,753	16,956,191	3,370,191	21,585,938
Ohio					26,062,720
Oklahoma	4,653,605		4,653,605	7,157,868	12,962,927
Oregon	23,642,364	10,141,659	33,784,023	5,500,821	21,992,596
South Dakota	11,471,138	397,866	11,869,004	12,802,946	24,534,450
Utah	10,330,242	31,685,613	42,515,855	5,487,668	4,537,917
Washington	5,613,943	6,299,221	11,913,164	10,764,568	20,069,148
Wisconsin	230,813		230,813	365,353	34,678,714
Wyoming	42,769,587	4,887,309	47,656,896	7,995,018	6,781,366
Grand total	312,177,366	601,919,608	914,096,974	147,356 902	748,085,964

(1) The unreserved lands in Alaska are mostly unsurveyed and unappropriated.
(2) So far as estimated.

PUBLIC SURVEYS.

The areas covered by surveys accepted by this office during the fiscal year ended June 30, 1901, are as follows:

State or Territory.	Acres.	State or Territory.	Acres.
Alaska	152	North Dakota	2,103,287
Arizona	715,201	Oregon	750,951
California	54,288	South Dakota	757,940
Colorado	264,333	Utah	535,721
Florida	2,829	Washington	292,658
Idaho	849,057	Wyoming	467,522
Minnesota	299,730		
Montana	1,665,918	Total	8,810,837
Nevada	51,260		

By the act of Congress approved June 6, 1900 (31 Stats., 615), making appropriations for sundry civil expenses of the government for the fiscal year ending June 30, 1901, and for other purposes, there was appropriated "For surveys and resurveys of public lands" the sum of $325,000, of which amount the Commissioner of the General Land Office was authorized to expend so much as he might deem necessary for examinations in the field, etc.

The sum of $75,000 was set aside to cover the cost of field examinations and the sum of $10,000 was reserved for emergencies, leaving the sum of $240,000 to be apportioned among the several surveying

districts. The apportionments made to the several districts were as follows:

Alaska	$5,000	Oregon	$22,000
Arizona	12,000	South Dakota	2,000
California	10,000	Utah	20,000
Colorado	6,000	Washington	30,000
Idaho	30,000	Wyoming	20,000
Minnesota	5,000	Examinations	75,000
Montana	40,000	Reserve fund	10,000
Nevada	10,000		
New Mexico	8,000	Total	325,000
North Dakota	20,000		

Further apportionments were made from time to time to several surveying districts from the fund of $10,000 held in reserve, and contracts were let and approved to the full extent of the means available.

The annual surveying instructions for the fiscal year ending June 30, 1901, will be found in the appropriate place in this report.

* * * * * * *

NEEDED LEGISLATION.

As shown above, legislation is required in respect to the following matters:

Lieu selections for reconveyed or relinquished tracts in forest reserves.

Withdrawal of unreserved forested lands.

Utilization of the forest cover on public lands in connection with the work of irrigation.

Extension of the Yellowstone National Park.

In addition to the above-mentioned subjects, it becomes necessary, in view of the failure of Congress to act favorably, as yet, on my recommendations of last year, to renew those recommendations as regards the following subjects:

Expansion of the provisions of the forest-fire law.—The need for more comprehensive legislation on the subject of forest fires is a matter of such foremost importance that I again recite the urgent reasons therefor set forth in my last report, which were as follows:

> The prevention and control of forest fires being the recognized paramount issue in connection with all efforts to protect and administer the great forests on our public lands, I laid special emphasis upon the subject in my last annual report and urged the need for a considerable expansion of the provisions of the forest-fire act of February 24, 1897 (29 Stat., 594), and subsequently, in reporting upon House bill 4339 (Fifty-sixth Congress, first session), I again recommended the enlargement of its provisions in certain respects.
>
> These recommendations were partially met by the amendatory act which was finally passed and approved on May 5, 1900, and showed that efforts to enforce the forest-fire act of February 24, 1897, demonstrated it to be almost worthless in consequence of the use of such terms therein as "willfully or maliciously" and "carelessly or negligently," imposing upon the prosecution the burden of proving willful intent in every case in which a fire was either started or allowed to spread.
>
> This difficulty was partially removed by the passage of the act of May 5, 1900 (Public, No. 92), which amended the former law by omitting the term "carelessly or negligently," in connection with leaving fires unattended, and by making certain minor changes therein. This modification of the former law, while desirable, was far from sufficient, as it left standing the term "willfully or maliciously" in connection with the starting of fires, which is objectionable upon precisely the same grounds. As the law now stands, even with the amendments made, every reckless sheep herder or hunter who fires the woods purposely can shelter himself under the assertion that it was not "willfully or maliciously" set on fire, but that the fire

escaped in spite of his care. In like manner, every railroad corporation causing sweeping conflagrations through public forests, as the result of failure to take proper precautionary measures in respect to flying sparks from its locomotives, can shield itself from responsibility in the matter under the same plea.

In fact, the act, as it stands, serves largely to effectually shield the negligent and careless. And when it is remembered that the greater number of destructive conflagrations result from negligence rather than maliciousness its ineffectiveness is apparent.

Nor does it fail merely at this point. It falls short in a number of other respects, as, for instance, its failure to contain a moiety provision in behalf of informers furnishing information leading to the apprehension and conviction of parties violating the provisions of the act. The experience of this office has demonstrated that the law can not be effectively administered in the absence of such a provision.

The entire scope of the act is altogether too limited. As shown in my annual report, the subject is one of paramount importance, requiring legislation that shall recognize the chief causes of fires on the public domain; and, as therein stated, "any attempt at effective legislation to prevent such fires should make ample provision to meet and overcome the evils in each of these directions."

It is plain that the mere passage of a provision to the general effect that it shall be unlawful to cause fires on the public domain falls far short of coping with the difficulty of making railroad companies take proper precautions to prevent their locomotives from starting the frightful conflagrations that yearly sweep through public forests; nor will any such general provision accomplish the much-needed purpose of compelling citizens to unite with the officers of the Government in efforts to control such conflagrations.

In fact, almost every essential provision in legislation upon this subject is ignored in the act. Its provisions make no attempt to meet and cope with the main evils in the case.

Authority to make arrests.—In connection with securing adequate legislation on the subject of forest fires, attention is again invited to the fact that a law which will give to the forest officers and rangers the right of arrest will go far toward stopping the careless habit of leaving camp fires burning and of bringing to justice persons guilty of maliciously setting out fires. I accordingly urge the enactment of a provision in a line with the bill recently introduced in Congress as H. R. 8912 (Fifty-sixth Congress, first session), but which failed of passage. The bill reads as follows:

A BILL to authorize arrests without warrant in certain cases in forest lands and forest reserves.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That all forest officers, special agents, and other officers having authority in relation to the protection of the public lands and the timber thereon shall have, and are hereby given, authority to make arrests, without process in hand, for the violation of the laws or rules and regulations relating to the forest reserves or other forest lands of the United States; and any person so arrested shall be taken for trial before the nearest United States commissioner within whose jurisdiction the reservation or forest land is located.

Creation of national parks for the preservation of prehistoric ruins, and for other purposes.—I have in former reports to the Department stated that I am impressed with the need for legislation which shall authorize the President to set apart and reserve, as national parks, by public proclamation, tracts of public land, which, for their scenic beauty, natural wonders, ancient ruins and relics or other objects of scientific or historic interest, or springs of medicinal or other properties, it is desirable to protect and utilize in the interest of the general public.

Owing to the want of some such general provision of law, each case, as it arises now, has to be made a matter for special legislation, and, in consequence, becomes subject to frequent delays and postponements, extending in some cases over years, which is a serious matter, since the need for promptness of action is frequently emergent, as testified

to by such organizations as the Smithsonian Institution, the National Geographic Society, etc.

Since Congress has empowered the President to set apart tracts of public land for forest-reservation purposes, affecting interests much more far-reaching and of far greater importance than those involved in cases of national parks, it appears altogether reasonable, and in a line with the policy already adopted, that the same power should be vested in the President in respect to reserving tracts of public land for national park purposes. This course, by materially expediting the work of reserving these tracts, would undoubtedly greatly further the interest of science.

SUMMARY OF RECOMMENDATIONS:

1. Recommends legislation for the appointment of a commission to make proper examination, consider and report with reference to the survey and disposal of the public lands in the insular possessions of the United States. (See p. 71.)

2. Renews recommendation of legislation regarding right-of-way grants that have lapsed for authorizing the Secretary of the Interior to declare the forfeiture thereof (See p. 79.)

3. Recommends discontinuance of the Yukon and the Circle district land offices in Alaska by consolidation with the Sitka office, at least for the present. (See p. 58.)

4. Recommends the repeal or modification of the act of June 16, 1898, 30 Statutes, 473, for the protection of homestead settlers who enter the military or naval service of the United States in time of war, referring to former recommendations on the subject. (See p. 82.)

5. Renews recommendation of legislation to provide for compelling the attendance of witnesses to testify in hearings ordered by this office on reports of special agents involving the validity or bona fides of entries of public land. (See p. 94.)

6. Recommends repeal of several laws relating to timber on unreserved public lands and the enactment instead thereof of a general law to afford a supply of timber for settlers and other parties in need thereof, and at the same time preserve the forests for the use of future generations. (See p. 96.)

7. Recommends that the appropriation for the prevention of depredations upon public timber and the protection of the public lands from unlawful entry or appropriation, be increased to not less than $185,000 for the coming fiscal year; also an appropriation of not less than $10,000 for the protection of timber on unreserved lands against fires. (See p. 104.)

8. Recommends federal legislation for the protection of fish and game in forest reserves. (See p. 136.)

9. Recommends legislation for the relief of bona fide settlers within forest reserves who settled prior to the establishment thereof, but who failed from ignorance or from unavoidable accident to place their claims of record within the statutory period. (See p. 137.)

10. That the clause in the act of June 4, 1897 (30 Stat., 36), which permits the exchange of lands within forest reservations for those without, be further modified by adding the following, to wit:

Provided, That the natural state of the tract relinquished has not been changed except to such an extent as may have been necessary in clearing the land for actual cultivation, and in any case such lands may be selected as shall be shown to be approximately of the same value as the lands relinquished.

Also that some legislation be had authorizing the rejection of any and all selections under said act for lands returned as agricultural lands should it be discovered, before the approval of the selection by this office, that the land involved is chiefly valuable for mineral. (See p. 116.)

11. The passage of an act which shall provide that all public lands which are more valuable for forest uses than for other purposes shall be withdrawn from settlement, entry sale, and other disposition, and be held for the protection and utilization of the timber thereon in accordance with the provisions of forest-reservation laws. (See p. 118.)

The enactment of a general law authorizing the establishment of national parks for the preservation of prehistoric ruins, petrified forests, caves, and for other purposes, as partially provided for in the bill H. R. 11021 (Fifty-sixth Congress, first session). (See page 154.)

12. That the provisions of the forest-fire act approved May 5, 1900, be extended to meet the various causes of fires and overcome the danger from every source. (See page 153.)

13. For the enactment of a law that shall empower forest officers, special agents, and other officers having authority in relation to the protection of public lands and the timber thereon to make arrests, without process in hand, for the violation of the laws or rules and regulations relating to the forest reserves or other forested lands of the United States. (See page 154.)

14. Recommendation renewed for the extension of the Yellowstone National Park. (See page 151.)

Respectfully submitted.

BINGER HERMANN,
Commissioner.

Hon. E. A. HITCHCOCK,
Secretary of the Interior.

REPORT OF THE COMMISSIONER OF INDIAN AFFAIRS.

OFFICE OF INDIAN AFFAIRS,
Washington, D. C., October 15, 1901.

SIR: The seventieth Annual Report of the Office of Indian Affairs is respectfully submitted.

WELL-MEANT MISTAKES.

In the last annual report some attention was given to the obstacles in the way of the Indian toward independence and self-support, and three of the most important were pointed out and made the subject of discussion. It was shown that the indiscriminate issue of rations was an effectual barrier to civilization; that the periodical distribution of large sums of money was demoralizing in the extreme; and that the general leasing of allotments instead of benefiting the Indians, as originally intended, only contributed to their demoralization.

Further observation and reflection leads to the unwelcome conviction that another obstacle may be added to these already named, and that is education. It is to be distinctly understood that it is not meant by this to condemn education in the abstract—far from it; its

advantages are too many and too apparent to need any demonstration here. Neither is it meant as a criticism upon the conduct or management of any particular school or schools now in operation. What is meant is that the present Indian educational system, taken as a whole, is not calculated to produce the results so earnestly claimed for it and so hopefully anticipated when it was begun.

No doubt this idea will be received with some surprise, and expressions of dissent will doubtless spring at once to the lips of many of those engaged or interested in Indian work. Nevertheless, a brief view of the plan in vogue will, it is believed, convince the most skeptical that the idea is correct.

There are in operation at the present time 113 boarding schools, with an average attendance of something over 16,000 pupils, ranging from 5 to 21 years old. These pupils are gathered from the cabin, the wickiup, and the tepee. Partly by cajolery and partly by threats; partly by bribery and partly by fraud; partly by persuasion and partly by force, they are induced to leave their homes and their kindred to enter these schools and take upon themselves the outward semblance of civilized life. They are chosen not on account of any particular merit of their own, not by reason of mental fitness, but solely because they have Indian blood in their veins. Without regard to their worldly condition; without any previous training; without any preparation whatever, they are transported to the schools—sometimes thousands of miles away—without the slightest expense or trouble to themselves or their people.

The Indian youth finds himself at once, as if by magic, translated from a state of poverty to one of affluence. He is well fed and clothed and lodged. Books and all the accessories of learning are given him and teachers provided to instruct him. He is educated in the industrial arts on the one hand, and not only in the rudiments but in the liberal arts on the other. Beyond "the three r's" he is instructed in geography, grammar, and history; he is taught drawing, algebra and geometry, music, and astronomy, and receives lessons in physiology, botany, and entomology. Matrons wait on him while he is well and physicians and nurses attend him when he is sick. A steam laundry does his washing and the latest modern appliances do his cooking. A library affords him relaxation for his leisure hours, athletic sports and the gymnasium furnish him exercise and recreation, while music entertains him in the evening. He has hot and cold baths, and steam heat and electric light, and all the modern conveniences. All of the necessities of life are given him and many of the luxuries. All of this without money and without price, or the contribution of a single effort of his own or of his people. His wants are all supplied almost for the wish. The child of the wigwam becomes a modern Aladdin, who has only to rub the Government lamp to gratify his desires.

Here he remains until his education is finished, when he is returned to his home—which by contrast must seem squalid indeed—to the parents whom his education must make it difficult to honor, and left to make his way against the ignorance and bigotry of his tribe. Is it any wonder he fails? Is it surprising if he lapses into barbarism? Not having earned his education, it is not appreciated; having made no sacrifice to obtain it, it is not valued. It is looked upon as a right and not as a privilege; it is accepted as a favor to the Government and not to the recipient, and the almost inevitable tendency is to encourage depend-

ence, foster pride, and create a spirit of arrogance and selfishness. The testimony on this point of those closely connected with the Indian employees of the service would, it is believed, be interesting.

It is not denied that some good flows from this system. It would be singular if there did not after all the effort that has been made and the money that has been lavished. In the last twenty years fully $45,000,000 have been spent by the Government alone for the education of Indian pupils, and it is a liberal estimate to put the number of those so educated at not over 20,000. If the present rate is continued for another twenty years it will take over $70,000,000 more.

But while it is not denied that the system has produced some good results, it is seriously questioned whether it is calculated to accomplish the great end in view, which is not so much the education of the individual as the lifting up of the race.

It is contended, and with reason, that with the same effort and much less expenditure applied locally or to the family circle far greater and much more beneficent results could have been obtained and the tribes would have been in a much more advanced stage of civilization than at present.

On the other hand it is said that the stream of returning pupils carries with it the refining influence of the schools and operates to elevate the people. Doubtless this is true of individual cases and it may have some faint influence on the tribes. But will it ever sufficiently leaven the entire mass? It is doubtful. It may be possible in time to purify a fountain by cleansing its turbid waters as they pour forth and then returning them to their original source. But experience is against it. For centuries pure fresh-water streams have poured their floods into the Great Salt Lake, and its waters are salt still.

What, then, shall be done? And this inquiry brings into prominence at once the whole Indian question.

It may be well first to take a glance at what has been done. For about a generation the Government has been taking a very active interest in the welfare of the Indian. In that time he has been located on reservations and fed and clothed; he has been supplied lavishly with utensils and means to earn his living, with materials for his dwelling and articles to furnish it; his children have been educated and money has been paid him; farmers and mechanics have been supplied him, and he has received aid in a multitude of different ways. In the last thirty-three years over $240,000,000 have been spent upon an Indian population not exceeding 180,000, enough, if equitably divided, to build each one a house suitable to his condition and furnish it throughout; to fence his land and build him a barn; to buy him a wagon and team and harness; to furnish him plows and the other implements necessary to cultivate the ground, and to give him something besides to embellish and beautify his home. It is not pretended that this amount is exact, but it is sufficiently so for the purposes of this discussion.

What is his condition to-day? He is still on his reservation; he is still being fed; his children are still being educated and money is still being paid him; he is still dependent upon the Government for existence; mechanics wait on him and farmers still aid him; he is little, if any, nearer the goal of independence than he was thirty years ago, and if the present policy is continued he will get little, if any, nearer in thirty years to come. It is not denied that under this, as under the

school system, there has been some progress, but it has not been commensurate with the money spent and effort made.

THROWING THE INDIAN ON HIS OWN RESOURCES.

It is easy to point out difficulties, but it is not so easy to overcome them. Nevertheless, an attempt will now be made to indicate a policy which, if steadfastly adhered to, will not only relieve the Government of an enormous burden, but, it is believed, will practically settle the entire Indian question within the space usually allotted to a generation. Certainly it is time to make a move toward terminating the guardianship which has so long been exercised over the Indians and putting them upon equal footing with the white man so far as their relations with the Government are concerned. Under the present system the Indian ward never attains his majority. The guardianship goes on in an unbroken line from father to son, and generation after generation the Indian lives and dies a ward.

To begin at the beginning, then, it is freely admitted that education is essential. But it must be remembered that there is a vital difference between white and Indian education. When a white youth goes away to school or college his moral character and habits are already formed and well defined. In his home, at his mother's knee, from his earliest moments he has imbibed those elements of civilization which developing as he grows up distinguish him from the savage. He goes to school not to acquire a moral character, but to prepare himself for some business or profession by which he can make his way in after life.

With the Indian youth it is quite different. Born a savage and raised in an atmosphere of superstition and ignorance, he lacks at the outset those advantages which are inherited by his white brother and enjoyed from the cradle. His moral character has yet to be formed. If he is to rise from his low estate the germs of a nobler existence must be implanted in him and cultivated. He must be taught to lay aside his savage customs like a garment and take upon himself the habits of civilized life.

In a word, the primary object of a white school is to educate the mind; the primary essential of Indian education is to enlighten the soul. Under our system of government the latter is not the function of the state.

What, then, is the function of the state? Briefly this: To see that the Indian has the opportunity for self-support, and that he is afforded the same protection of his person and property as is given to others. That being done, he should be thrown entirely upon his own resources to become a useful member of the community in which he lives, or not, according as he exerts himself or fails to make an effort. He should be located where the conditions are such that by the exercise of ordinary industry and prudence he can support himself and family. He must be made to realize that in the sweat of his face he shall eat his bread. He must be brought to recognize the dignity of labor and the importance of building and maintaining a home. He must understand that the more useful he is there the more useful he will be to society. It is there he must find the incentive to work, and from it must come the uplifting of his race.

As has been said before, in the beginning of his undertaking he should have aid and instruction. He is entitled to that. Necessaries of life also will doubtless have to be furnished him for a time, at least until his labor becomes productive. More than this, so long as the Indians are wards of the General Government and until they have been absorbed by and become a part of the community in which they live, day schools should be established at convenient places where they may learn enough to transact the ordinary business of life. Beyond this in the way of schools it is not necessary to go—beyond this it is a detriment to go. The key to the whole situation is the home. Improvement must begin there. The first and most important object to be attained is the elevation of the domestic life. Until that is accomplished it is futile to talk of higher education.

This is a mere outline. There are many details to be considered and some difficulties to overcome. Of course it can not all be done at once. Different conditions prevail in different sections of the country. In some places the conditions are already ripe for the surrender of Government control; in others the natural conditions are such and the Indians are so situated that if protected in their rights they should soon be ready for independence. But in other places the question assumes a more serious aspect. Located in an arid region, upon unproductive reservations, often in a rigorous climate, there is no chance for the Indian to make a living, even if he would. The larger and more powerful tribes are so situated. So long as this state of things exists the ration system with all its evils must continue. There can be little or no further reduction in that direction than that already made without violating the dictates of humanity. Already in several quarters there is suffering and want. In these cases something should be done toward placing such Indians in a position where they can support themselves, and that something should be done quickly.

But whatever the condition of the Indian may be, he should be removed from a state of dependence to one of independence. And the only way to do this is to take away those things that encourage him to lead an idle life, and, after giving him a fair start, leave him to take care of himself. To that it must come in the end, and the sooner steps are taken to bring it about the better. That there will be many failures and much suffering is inevitable in the very nature of things, for it is only by sacrifice and suffering that the heights of civilization are reached.

CUTTING OFF RATIONS.

In pursuance of the policy of the Department to cut off rations from all Indians except those who are incapacitated in some way from earning a support, this office issued an order in June last to the six great Sioux agencies directing the agents to erase from the ration rolls all Indians who had become self-supporting and had therefore complied with the Black Hills treaty of 1877. And further, to issue rations to other Indians only in accord with their actual needs and to inaugurate, wherever it is possible, the policy of giving rations only in return for labor performed, either for themselves or for the benefit of the tribe.

While a sufficient lapse of time has not taken place to determine the

great benefit this action will have on the industrial and educational progress of these Indians, the results obtained so far have been very gratifying, as well as surprising. At one agency 870 persons were declared entirely self-supporting and were dropped from the ration rolls; at another, 400; at another, 300. Of course a large number of these were "squaw men" and their families. Some were not only self-supporting, but able to live in comparative affluence; some had grown wealthy through the ration system. At first the order caused considerable dissatisfaction among those it affected, as naturally it would, but it was well received by the majority of the Indians. It would seem rather a sad commentary on the ration system to see Indians driving into the agency regularly in buggies and carriages to receive a gratuitous distribution of supplies from an indulgent Government "to keep them from starving."

Since the issuance of the above order to the Sioux a somewhat similar order has been issued to all other ration agencies. These agencies receive rations under a somewhat different arrangement, as in almost every instance the ration is a gratuity and not stipulated by any treaty, as in the case of the Sioux. Here the order has been better received and the result has been equally surprising. The office feels that a great stride has been taken toward the advancement, civilization, and independence of the race; a step, that if followed up, will lead to the discontinuance of the ration system as far as it applies to able-bodied Indians, the abolition of the reservation, and ultimately to the absorption of the Indian into our body politic.

The application of the present policy to Indian reservations is not by any means entirely new except in the general application. A very few agents had adopted the system already with very marked and gratifying results. On one reservation quite a number of those erased from the ration rolls became earnest advocates for this policy, and were very much elated when another name would fall from the rolls. These became excellent helpers, and rendered the Government much assistance by example and precept. Their influence was very strongly felt and was worth more toward the advancement of the tribe than many times their number of "outside" or white people.

FINANCE.

Appropriations.—The aggregate of the appropriations contained in the act making appropriations for the current and contingent expenses of the Indian Department and for fulfilling treaty stipulations with various Indian tribes for the fiscal year ending June 30, 1902, is $9,736,186.09, which represents the total amount appropriated for the Indian service.

The aggregate of the appropriations made for the fiscal year 1901 is $9,040,475.89. The aggregate given in the last annual report was $8,873,239.24. The difference of $167,236.65 is accounted for by appropriations made since that report in the urgent deficiency act of January 4, 1901, and the deficiency act of March 3, 1901, as follows:

Current and contingent expenses	$20,000.00
Miscellaneous	144,200.00
Support of schools	3,036.65
Total	167,236.65

The different objects of appropriations for the two years are shown by the following table:

TABLE 1.—*Appropriations for the Indian service for the fiscal years 1901 and 1902.*

	1901.	1902.
Current and contingent expenses	$844,240.00	$738,240.00
Fulfilling treaty stipulations	2,512,447.45	2,229,846.09
Miscellaneous support, gratuities	646,500.00	628,000.00
Incidental expenses	92,680.00	93,400.00
Support of schools	3,083,403.65	3,244,250.00
Miscellaneous	1,185,204.79	723,050.00
Payment for lands	676,000.00	1,925,000.00
Capitalization of annuities		154,400.00
Total	9,040,475.89	9,736,186.09

The excess of 1902 over 1901 is $695,710.20. This excess is accounted for as follows:

Increase:		
Incidental expenses		$720.00
Support of schools		160,846.35
Payment for lands		1,249,000.00
Capitalization of annuities		154,400.00
		1,564,966.35
Decrease:		
Current and contingent expenses	$106,000.00	
Fulfilling treaty stipulations	282,601.36	
Miscellaneous support, gratuities	18,500.00	
Miscellaneous	462,154.79	
		869,256.15
		695,710.20

The estimates for 1902 submitted to Congress were as follows:

Current and contingent expenses	$736,540.00
Fulfilling treaty stipulations	2,229,846.09
Miscellaneous supports, gratuities	618,500.00
Incidental expenses	92,400.00
Support of schools	2,989,585.00
Miscellaneous	658,700.00
Payment for lands	1,925,000.00
Total	9,250,571.09

Expenditures.—The total expenditures for the fiscal year ending June 30, 1901, were $10,896,073.35, as follows:

Current and contingent expenses		$747,997.87
Fulfilling treaty stipulations		2,413,090.50
Miscellaneous supports, gratuities		644,446.16
Trust funds:		
Principal	$392,042.39	
Interest	1,347,605.80	
		1,739,648.19
Incidental expenses		80,196.78
Support of schools		3,024,021.81
Miscellaneous		2,246,672.04
		10,896,073.35

It is estimated that of the amount reported above as expended in fulfilling treaty stipulations fully $600,000 were spent for school purposes. Add this to the amount reported expended for support of schools and it will appear that the total amount expended for Indian education exceeded $3,600,000.

EDUCATION.

Education and civilization are practically synonyms, and in the present state of all nations the last is impossible without the first. The Indian tribes of the United States are no exception to the universal rule. The Indians who have made the most advancement are those who have assimilated the white man's educational methods in greater or lesser degree. To civilize, therefore, is to educate, and to educate means the breaking up of tribal customs, manners, and barbarous usages, and the assumption of the manners, usages, and customs of the superior race with whom they are thereafter to be thrown in contact.

Statistical information indicates that the present system of industrial education, supplemented by a common-school curriculum, is making steady inroads upon the inherited tendencies of these people. The processes are of necessity gradual, and to be appreciated the conditions of to-day must be contrasted with those of a generation ago, when the system was in the formative state. Familiarity with the Indians, then and now, furnishes gratifying indications that the ultimate solution of of the Indian problem is in sight. The effect of substituting acquired for hereditary tendencies can already be seen and compared, demonstrating beyond argument that persistent efforts along the well-defined lines of the present policy, extending through a generation, will fix new habits, inculcate new aspirations, and bring the Indian into homogeneous relations with the American people.

The Indian school system is a simple one, coordinated in all its parts for the attainment of the end to be reached. It has prepared and will continue to prepare the Indian youth of our land for the duties and responsibilities of American citizenship.

For the purpose of administration Indian schools are divided into day and boarding schools. The former are located usually upon the reservations, and are maintained for camp Indians. Some of these, however, are situated off the reservations, and are conducted in buildings owned by the Indians or rented by the Government. Boarding schools on the reservations are known as "reservation schools," while those located away from the Indian land, as "nonreservation schools." Aside from these schools under strictly governmental control there are mission schools conducted by religious and benevolent associations. Public schools are also utilized wherever the State or Territorial authorities will permit coeducation of the races.

RELATION OF THE RESERVATION TO EDUCATION.

Indian reservations were the outgrowth of the humanitarian policy of the Government in dealing with wild bands of marauding savages who in the early portion of the last century roamed over large sections of the United States. It was a matter of segregating and confining them, for political and commercial reasons, upon limited areas, where they could either be under definite surveillance or exterminated as a race. There appeared to be no middle ground between surveillance and extermination, and the former was adopted as a fixed policy, which has continued until the present time. The vicious ration and annuity system was its logical corollary.

However wise such a policy may have been during the past century,

the condition of the Indian and his surrounding white neighbors at the beginning of a new century demand a change. Then the West was sparsely settled; the hardy pioneer went to his work, as did his earlier prototype from Europe, with ax and gun in hand; the railroad and telegraph were in their infancy, and this vast domain gave little promise of its present greatness. Now the busy wheels of commerce, the hum of industry, and the lowing of countless millions of cattle upon the broad prairies, supplanting the buffalo, can be heard; bustling cities, with teeming thousands, have sprung up on the sites of old Indian homes and battlefields. Conditions have changed, and policies must be changed to suit them. The past two generations have witnessed the sowing of the seeds of education and civilization by both the Government and the missionaries. These seeds have not always fallen on barren ground, but have produced some good results. Advancing white civilization has unconsciously aided the development of the Indian, until there remain few reservations upon which at present the educational interests are not paramount to all others.

During the past four years the endeavor of this office has been to crystallize the newer policy of abandoning the reservation system of Indian government wherever practicable. Constant tutelage is not conducive to the evolution of a manly character. Responsibilities must be assumed, met, and appreciated. Under the old agency system this idea could not be fostered, but as schools have multiplied and students have returned from distant schools to quicken the entire mass of Indian thought, the change may now profitably be made, not only for the Indian, but for the surrounding whites.

The principle above outlined was advanced early in the last decade, when Congress, in the appropriation act for the fiscal year 1893, declared that—

> The superintendent of the Indian Training School at Cherokee, N. C., shall, in addition to his duties as superintendent, perform the duties heretofore required of the agent at said Cherokee Agency, and receive in addition to his salary as superintendent, $200 per annum, which sum is hereby appropriated for the purpose, and shall give bond as other Indian agents, and that the office of agent be, and the same is hereby, abolished at that place.

In the appropriation act for the succeeding year a clause was inserted giving the Commissioner of Indian Affairs, with the approval of the Secretary of the Interior, general authority to devolve the duties of any Indian agency upon the bonded superintendent of the training school at such agency, whenever in his judgment such superintendent could properly perform the duties of the position. This item has been continued in all subsequent appropriation acts.

There were 57 Indian agencies in 1893, which were increased the next year to 58, dropping the succeeding year to 57 again, since which time there has been no increase in the number allowed by Congress. For 1896 the number was 57, and for each of the succeeding years, including 1900, there were 56. A material reduction of these was made in 1901, and a further one of four for 1902, leaving for the present fiscal year, 1902, 49 Indian agents appropriated for.

As stated, the first change was made by placing the superintendent of the Eastern Cherokee School in charge of the reservation. The next was made in 1895, when the duties of the Puyallup Consolidated Agency, Wash., and the Grande Ronde Agency, Oreg., were devolved, respectively, on the two superintendents of the training schools. In

1897 the superintendent of the training school assumed the duties of the Round Valley Agency in California, and in 1899 similar action was taken at Hupa Valley Agency in the same State. There were a number of such changes during the next two years, as at the agencies of Mescalero, N. Mex.; Western Shoshoni, Nev.; Nevada, in Nevada; Quapaw, Okla.; Warm Springs, Oreg.; and Sisseton, S. Dak. Portions of agencies were, during the present and past fiscal years, dissevered and erected into separate jurisdictions under charge of the bonded superintendents of training schools located on such dissevered portions. These were Moqui in Arizona, from the Navaho Agency; Fort Yuma, Ariz., from the Mission Tule in California; and the Pawnee, from the Ponca, Pawnee, Oto, and Oakland Agency, Okla. The Oneida Indians were placed under the superintendent of the Oneida (Wisconsin) school; certain Winnebago under the superintendent of the Wittenberg (Wisconsin) school; the Flandreau Sioux, under the superintendent of the Flandreau (South Dakota) school; the Walapai and Havasupai under the superintendent of the Truxton Canyon (Arizona) school; and the various Pueblo day schools and adult Indians were divided between the superintendents, respectively, of the training schools at Santa Fe and Albuquerque, N. Mex.

Congress in the appropriation act for the fiscal year 1902, having failed to provide for the United States Indian agents at Tulalip, Wash., and Siletz, Oreg., these reservations were on July 1 placed in charge of the superintendents of the training schools.

The long distance of nearly 200 miles placed the western portion of the Navaho Reservation, in Arizona so far from the agency that some arrangement was required for the proper supervision of the Indians located there; therefore, in July of this year, that portion of the reservation, and a small section of the northwest corner of the Moqui Reservation, were segregated and placed in charge of the bonded superintendent of the Western Navaho training school situated at Blue Canyon.

From the above data it will be seen that, although the idea of placing the educational features of the reservation in advance of that of the adults originated scarcely ten years ago, it has been practicable to carry out the same at a few places only. The experiment, for experiment it was, has now been fully tried, and demonstrates beyond question that the policy is in the line of good administration and makes a distinct advance in the solution of the Indian problem. At the places named the substitution of the bonded superintendent of the school for the Indian agent has invariably produced good results. The business interests of the adults are as carefully conserved as they were under the jurisdiction of an agent, while, on the other hand, the education and civilization of these people are given their proper preeminence.

The perpetuation of the reservation and agency systems at those places where such systems have outlived their usefulness means the perpetuation of the Indian problem and indefinite appropriations by Congress. A careful, economical administration clearly indicates the duty of this Department to advance all policies that tend to the final and early abandonment of the paternal dealings of the Government with the Indians. That the reservation system of segregating these peoples does not solve the problem is illustrated by the New York Indians and the Pamunkies of Virginia. At the time of the settlement of Jamestown, Va., in 1607, the territory surrounding the same was

the home of three great Indian confederacies, of which the largest was the Powhatan. The most powerful of these tribes was the Pamunky, numbering at that time about 1,000. "The history of these Pamunky Indians, whose distinction is to be the only Virginia tribe that has survived the encroachments of civilization" until the present time, when they are still living on their reservation of 800 acres, with a population of 100, fully illustrates the futility of endeavoring to solve the Indian problem by continuing longer than necessary for police and commercial reasons the numberless Western Indian reservations and their coordinate evils of rations, clothing, and governmental control.

The Indians can not be made an integral part of the body politic or fitted for citizenship by herding them on limited areas, with a separate government, and feeding them in idleness; but they can be thus advanced by giving the children industrial training, breaking up their reservations, and throwing them upon their own resources among the white people.

The Pamunky Indian segregated from the people surrounding him has remained a Pamunky Indian for three hundred years; but, on the other hand, the Iowa Indian on the Great Nemaha Reservation in Kansas has in several generations, under the processes outlined, reached that state where he is being absorbed and assimilated by the surrounding white people. Supervisor of Schools A. O. Wright, in a recent report, stated that these Iowa Indians are rapidly ceasing to be Indians, and taking on the ways and customs of the white man; they prefer the white schools and are sending their children to them; that they are absolutely able to take care of themselves. The boarding school for these Indians was therefore abandoned at the beginning of the current fiscal year, and two day schools substituted. In a year or so these may be given over to the general public for use of both Indian and white children as public schools.

TRAINING OF PUPILS.

The ground work of all instruction in Indian schools is the systematic inculcation of the principles of work. The central thought is the teaching of pupils how to labor and to so apportion the same that the results will appear in their own lives and homes. The entire history of these people is filled with legends against the dignity of work. Drudgery was the part of woman, and idleness of man. Even the women of the tribe bound their own chains tighter by pointing the finger of scorn at the reckless warrior who braved the traditions of his race by engaging in honest toil for the support of his family. In derision he was called a "squaw," and made to feel his inferiority. With these hereditary instincts to combat, the discouragements of the schools have been very great.

The systematic work of the boarding schools is irksome to the pupils themselves. They prefer the wild, free, and easy life among the woods, where care comes only from nature's cravings of hunger. The school people therefore get little encouragement from parents, many of whom contend that their children are sent to the schools not to work like squaws, but simply to be taught from the white man's books.

The coordination of work and study is the prime essential in the course of study in Indian schools. All the schools teach the practical doing of that which the mind, under proper intellectual stimulus, finds

should be done. The literary training is limited to that usually embraced in the curriculum of the white public schools, while the industrial pursuits taught are of that character determined by the natural aptitude of the pupil and his future environment.

As a very large percentage of the boys propose to live on their allotments, and thus become farmers, stress is laid on those trades the rudiments of which every agriculturist should understand. They are taught blacksmithing, carpentry, stock raising, care of tools, and such allied industries to an extent commensurate with their future vocation. The larger training schools elaborate these industries, and the iron and wood work of the average Indian boy will bear favorable comparison with that turned out of the white schools. Statistics of returned pupils indicate that there are hundreds of graduates of the training schools who are earning their own living as shoemakers or cobblers, blacksmiths, carpenters, bricklayers, painters, farmers, etc. The ratio of skilled workmen among these may not be so great as among the whites, but it is sufficient to illustrate the practicability of their becoming self-supporting. As laborers, where freed from the debasing influence of rations and annuities, they are as good as the average of the country. Many miles of irrigation ditches have been constructed on various reservations by this labor, and their faithfulness and efficiency are fully attested when under kindly and intelligent supervision.

The Indian girl, as well as her white sisters, is handicapped in the eternal struggle of life. Her opportunities for earning her own livelihood are more restricted than theirs; but as time rolls on these restrictions must disappear, as they have for the white woman.

Samples of garments cut, fitted, and made by the brighter girls in the training schools would not be out of place in first-class white shops. The capacity is inherent in the Indian, and its development is only a question of time. These pupils are taught the care of home, the production of simple household articles, mending, and the manifold duties of the housewife. Cooking is theoretically and practically taught. The demand for Indian cooks from those institutions which make a specialty of this training evidences the opening of new avenues by means of which they make escape from the iron barriers of the reservation. As nurses they are sympathetic, efficient, and faithful. Every opportunity which can be afforded is presented, that they may become independent. Many who go back to their homes marry educated Indians, and seem anxious to put into practice the lessons learned in the schools.

The day in Indian schools is divided into two parts of three hours each, one of which is devoted to the study of books and the other to industries taught in the schools. The object of education is civilization, and the object of civilization is to make the Indian self-reliant, self-supporting, and independent of further bounties on the part of the General Government. The present system of industrial training is for this purpose, and results seem to indicate that it is successful so far as it goes. The demands upon the generous appropriations of Congress are so great for the construction and repair of buildings that frequently the equipment of schools for industrial training is not always adequate to the necessities, but no matter how small and meager the equipment may be, the school officials are required to utilize all means at their command for carrying out the general plan. At

many reservations, although it is frequently unsatisfactory, agency shops and employees are employed for training pupils in the simple industries.

The new course of study prepared by the superintendent of Indian schools follows closely the line of policy here outlined, and will result in greater uniformity of method and work. Its flexibility, without destroying the method or purpose, permits its adaptability to the various tribes, whose mental characteristics are as varied as the reservations on which they reside.

COMPULSORY EDUCATION.

Although surrounded by a superior civilization and provided with schools in their midst, great numbers upon many reservations still retain the use of their own language or are not sufficiently fluent in the use of English to comprehend readily the great movement being made for the benefit of their children. Collecting agents for nonreservation schools have exceeding difficulty in making the conservative Indian understand the reasons why the Government desires to place his child in school. Never having had the benefit of such opportunities the adult Indian fails to understand the advantages which can accrue to their loved ones by taking them from the parental tepee and placing them among strangers. Coupled with a natural disinclination to lose sight of his children, his hereditary language, manners, and customs are all sacred to him; nor does he desire his children to learn those things which are to him foreign and distasteful. Love of his own vernacular has been imbued for generations, and on some reservations it is no uncommon occurrence for the older element, as in the past, to recount in their own picturesque language the woes caused by the advent of the white man, the host of so-called broken treaties, disregarded promises, and general bad treatment of the Government. This constant repetition by the fathers and grandfathers tends to inculcate an unconscious dislike, if not a positive hate, for the ways of civilization. The industrial feature of Indian schools does not appeal to him, as the savage rarely earns his living by the sweat of his brow. The women of the tribe are generally the breadwinners when manual labor is required. Around the camp fire legends of the past are poured in willing ears, and when a collecting agent from Government or mission school appears he is an unwelcome shadow on pleasant dreams. If, perchance, the awakening of hope for a better future springs into the heart of the young boy or girl and his consent is obtained, it not infrequently occurs that some toothless grandmother or old chieftain interposes an objection which sentimentalists argue should be respected by the Government. To do so will permit, if not force, the progeny of a race capable of taking its place in our civilization to grow up in ignorance and idleness. Some argue that "to break up this Indian home relation deliberately and systematically may apparently aid in solving the problem by casting off all the older generation as beyond help and unworthy of it, but to do so is to fight against nature, and in the end against God and the principles which lie at the foundation of home and state."

It is not the purpose of the Government to break up the Indian's home, but to strengthen it; nor is it a part of the policy to have no

sympathy for the older Indian, however patent the fact that he has grown gray in the ways of his ancestors, and walks on in defiance of civilization. The home life of the average Indian, who objects to the education of his children, is not founded upon "the principles which lie at the foundation of home and state." That home life is antagonistic in every respect to all those vital elements which have built up this great Commonwealth.

There is another class of Indians who objects to his child being sent away from the reservation to school. The people do not want to change their method of living so long as the Government is willing to feed and clothe them. The school educates the child to be self-supporting and independent. It encourages him to leave his reservation and strike out for himself among the white people. Herein is a material reduction in the "summum bonum" of this class, who may have to exert themselves thereafter to secure more rations.

While Indians of the characters above described are far too numerous, there are yet a great many who are anxious to give their children every advantage. Force is always distasteful, and it is rarely used in compelling attendance, but the necessity for proper authority to do so is plainly indicated. That enlightened communities of this country and Europe require such laws is evidence that they are essential for those Indians who, from ignorance or other causes, interfere with the attendance of pupils.

Realizing the necessity for banishing ignorance from its borders, the State of Idaho has taken a step in the right direction. The following is the text of a law recently passed by the legislature of that State:

AN ACT compelling the attendance of children at schools where tuition, lodging, food, and clothing are furnished at the expense of the United States or the State of Idaho.

Be it enacted by the legislature of the State of Idaho:

SECTION 1. That whenever the Government of the United States or the State of Idaho shall erect, or caused to be erected and maintained, a school for general educational purposes within the State of Idaho, and the expense of the tuition, lodging, food, and clothing of the pupils therein is borne by the United States or the State of Idaho, it shall be compulsory on the part of every parent, guardian, or other person in the State of Idaho having control of a child or children between the ages of five and eighteen years, eligible to attend said school, to send such child or children to said school for a period of nine months in each year, or during the annual term, unless such child or children is or are excused from such attendance by the principal or superintendent of said school, upon its being shown to the satisfaction of said principal or superintendent that the bodily or mental condition of such child or children has been and is such as to prevent his, her, or their attendance at school, or application at study for the period required, or that such child or children is or are taught in the public schools, private school, or at other school or at home in such branches as are usually taught in public schools: *Provided*, That in case the Government of the United States or the State of Idaho does not make provision for free transportation of said child or children to and from their homes to said school, then he, she, or they shall not be liable to the provisions of this act, unless they reside less than ten miles from such school.

SEC. 2. It shall be the duty of all principals or superintendents of the school or schools mentioned in this act, before attempting to enforce the provisions of this act hereinafter mentioned, to serve, or cause to be served, a demand for the attendance of certain children, naming them, and also designating the school to which their attendance is required, upon the parent, guardian, or other person having charge of said child or children as may be eligible to attend said school over which he has charge, and a copy of this act; and such parent, guardian, or other person having charge of said child or children shall have ten days to either deliver said child or

children at said school or to the principal or superintendent thereof, or furnish satisfactory proof that the bodily or mental condition of said child will not admit of attendance.

SEC. 3. If, at the expiration of ten days after such notice or demand, the parents, guardian, or other person having charge of said child or children shall have failed or refused to comply with this act, the principal or superintendent shall cause a demand to be made upon such parent, guardian, or other person for the amount of the penalty hereinafter provided; and if such parent, guardian, or person shall neglect or refuse to pay the same within five days after making said demand, the superintendent or principal shall commence proceedings in the name of the State for the recovery of the fine hereinafter provided, before any court having jurisdiction: *Provided*, That nothing in this act shall apply to any child or children who is or are actually and necessarily compelled to labor for the support of such parent.

SEC. 4. Any parent, guardian, or other person having control or charge of any child or children, failing to comply with the provisions of this act, shall be liable to a fine of not less than five dollars nor more than twenty-five dollars for the first offense, nor less than ten dollars nor more than fifty dollars for the second offense and each subsequent offense, beside the cost of collection.

SEC. 5. All fines collected under the provisions of this act shall be paid into the county treasury, the same to be placed to the credit of the general school fund.

SEC. 6. All acts and parts of acts in conflict with this act are hereby repealed.

Approved on the 12th day of March, 1901.

FRANK W. HUNT, *Governor.*

Full opportunity has not as yet been had for testing this law, but its provisions indicate that the people of that State are willing to cooperate with this department in compelling attendance.

Supt. H. B. Peairs, of Haskell Institute, Lawrence, Kans., collated data on the need of compulsory education furnished by 180 agents, superintendents, and supervisors in the Indian school work, of which number 176 were heartily in favor of some compulsory legislation.

The sum total of the reasons given were thus expressed by Superintendent Peairs:

> The people are willing to be taxed for the purpose of aiding general education, but I do not believe they would approve the expenditure of millions of dollars year after year, and then go meekly to ignorant, superstitious Indians and ask them whether they will send their children to partake of the advantages provided and paid for. There is a feeling that Indian educational work should be only a temporary one, which is certainly true. To this end we believe all Indian children of suitable age should be kept in school.

Compulsory school laws have been fully discussed in previous reports of the Indian Department and action is again urged to the end that the final solution of the fate of the Indian may be hastened, the people relieved of heavy annual burdens for support of schools and adults, and the final disappearance of the Indian in the mass of white population.

* * * * * * *

THE WINNEBAGO OF WISCONSIN.

Henry W. Lee, of Wisconsin, filed a claim in the Department January 30, 1888, against the Winnebago Indians of Wisconsin for the sum of $5,000 on account of alleged services as attorney for these Indians. No contract for services rendered by Mr. Lee to these Indians was ever authorized or approved by the Department, and this office, as well as the Department, has uniformly denied his claim and refused to pay any part of it. Mr. Lee therefore appealed to Congress for relief.

Senate bill No. 3499, Thirty-sixth Congress, first session, reads as follows:

The Secretary of the Interior is hereby directed to pay to Henry W. Lee, or his legal representatives, the sum of ten thousand dollars, provided to be paid him out of the moneys of the Winnebago Indians of Wisconsin by the act of Congress approved August twenty-third, eighteen hundred and ninety-four, said sum when so paid to be in full discharge of the claim of said Lee for services rendered said Indians.

This bill was referred to the Court of Claims under the following resolution from the Senate Committee on Indian Affairs:

Resolved, That the bill (S. 3499) entitled "A bill for the relief of Henry W. Lee," now pending in the Senate, together with all the accompanying papers, be, and the same is hereby, referred to the Court of Claims, in pursuance of the provisions of an act entitled "An act to provide for the bringing of suits against the Government of the United States," approved March 3, 1887. And the said court shall proceed with the same in accordance with the provisions of such act, and report to the Senate in accordance therewith, showing, among other pertinent matter, the value of the services referred to in said bill, if any, which were performed by the said Henry W. Lee, what compensation he has already received therefor, and what balance, if any, is still his due.

It will be observed that the bill increases his claim from $5,000 to $10,000. In his original and amended petitions now pending in the Court of Claims and under investigation and consideration by the Department of Justice he claims a fee of $64,144.90, less $508.14 paid him, as he admits, by the Indians.

Upon a communication dated June 14, 1901, from L. C. Pradt, Assistant Attorney-General, relating to this claim, this office reported that after a very thorough investigation of the matter it was confirmed in the belief that the claim of Mr. Lee was not only unjust, but fraudulent, and that he should not be allowed any additional compensation for services alleged to have been rendered the Indians. In fact, the rapidity with which his claim increased from its original sum is sufficient to stamp the whole matter as a fraud.

Very respectfully, your obedient servant,

W. A. JONES,
Commissioner.

The SECRETARY OF THE INTERIOR.

REPORT OF THE COMMISSIONER OF PATENTS.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 19, 1901.

SIR: Complying with the request contained in your letter of June 22, 1901, I beg to submit herewith the following report of the business of the United States Patent Office for the fiscal year ended June 30, 1901:

Applications and caveats received.

Applications for letters patent	42,082
Applications for design patents	2,368
Applications for reissue patents	101
Applications for registration of trade-marks	2,312
Applications for registration of labels	1,036
Applications for registration of prints	176
Caveats	1,860
Total	49,935

Applications awaiting action.

Number of applications awaiting action on the part of the Office on July 1, 1901 7,683

Applications for patents, including reissues, designs, trade-marks, labels, and prints.

June 30—		June 30—	
1892	43,544	1897	47,746
1893	43,589	1898	44,210
1894	39,206	1899	40,320
1895	41,014	1900	45,277
1896	45,645	1901	48,078

Applications awaiting action on the part of the Office.

June 30—		June 30—	
1892	9,447	1897	12,241
1893	8,283	1898	12,187
1894	7,076	1899	2,989
1895	4,927	1900	3,564
1896	8,943	1901	7,683

Patents granted, and trade-marks, labels, and prints registered.

Letters patent granted (including reissues and designs)	26,481
Trade-marks registered	1,826
Labels registered	824
Prints registered	124
Total	29,255

Patents withheld and patents expired.

Letters patent withheld for nonpayment of final fees	4,288
Letters patent expired	20,690
Applications allowed awaiting payment of final fees	8,189

Expenditures.

	Expended.	Estimated liabilities.	Total.
Salaries	$768,716.70		$768,716.70
Scientific library	1,273.93	$726.07	2,000.00
Transportation of publications to foreign countries			
Postage on foreign matter	2,591.00		2,591.00
Stationery	12,217.65		12,217.65
Furniture	3,963.99		3,963.99
Carpets	2,763.66		2,763.66
Ice	513.16		513.16
Telephones	543.00		543.00
Washing towels	100.88		100.88
Refitting attorneys' room	2,367.13		2,367.13
Shelving, sash, doors, etc	5,139.08		5,139.08
Sundries	6,664.33		6,664.33
Law library	392.25		392.25
Public use of inventions and defending suits	22.45		22.45
Official Gazette, illustrations, paid contractor	62,100.00		62,100.00
Photolithographing, paid contractor	101,715.47		101,715.47
Blue-print work, paid contractor	4,284.07		4,284.07
Printing and binding:			
Paid Public Printer for producing the Official Gazette and indexes out of the appropriation for 1901	67,791.32	5,267.00	73,058.32
Printing specifications	217,639.97		217,639.97
Miscellaneous printing and binding	18,148.42		18,148.42
International protection of industrial property	728.60		728.60
Total	1,282,977.06	5,993.07	1,288,970.13

Receipts and expenditures.

Receipts from all sources	$1,408,877.67
Expenditures (including total in all appropriations)	1,288,970.13
Surplus	119,907.54

Comparative statement.

June 30—	Receipts.	Expenditures.	June 30—	Receipts.	Expenditures.
1892	$1,268,727.35	$1,114,134.23	1897	$1,343,779.44	$1,088,473.16
1893	1,288,809.07	1,111,444.22	1898	1,253,948.44	1,092,449.83
1894	1,183,523.18	1,053,962.38	1899	1,209,554.88	1,148,663 48
1895	1,195,557.07	1,038,166.08	1900	1,358,228.35	1,247,827.58
1896	1,307,090.30	1,097,368.85	1901	1,408,877 67	1,288,970.13

Summarizing these tables, there were received in the last fiscal year 42,082 applications for mechanical patents, 2,368 applications for designs, 101 applications for reissues, 1,860 caveats, 2,312 applications for trade-marks, 1,036 applications for labels, and 176 applications for prints. There were 26,481 patents granted, including reissues and designs; 1,826 trade-marks, 824 labels, and 124 prints were registered. The number of patents that expired was 20,690. The number of allowed applications which were by operation of law forfeited for non-payment of the final fees was 4,288. The total receipts of the office were $1,408,877.67; the total expenditures were $1,288,970.13, and the surplus of receipts over expenditures, being the amount turned into the Treasury, was $119,907.54.

THE WORK OF THE OFFICE.

The volume of work of this Bureau has reached unprecedented figures. It indicates by the regular character of its increase that it is likely to continue, and may be taken as representing the general prosperity and growth of the country. This large volume of work has only been kept in hand by the greatest effort of the examining divisions and the clerical force of the office. A considerable portion of the examining divisions has been working under a rule requiring attendance until 5 o'clock, and it is very evident that the work can only be successfully kept up with reasonable promptness by an increase of office force, if the present volume of business continues.

One of the greatest difficulties which this Office has to contend with is the fact that the requirements of training in the examining divisions are so great and the opportunities afforded to our examiners to engage in business outside of the Office are so frequent that this Office is continually losing numbers of its best equipped men, who leave it for exterior employment. New men starting in this work are comparatively inefficient until after a considerable period of training, and it would seem to be self-evident that this Office should retain its highly trained examiners by giving them such increase of salary as should make their continuance here more desirable to themselves.

An increase in the clerical force is also required, since the clerical work has increased in equal ratio with the work of the examining divisions. In the clerical force the salary paid to stenographers and typewriters ranges from $720 to $900, which is less than the amount

paid to this class of clerks in other bureaus, so that we are at the disadvantage of having some of the best of our clerks transferred to other departments where their services are better compensated. This Bureau should be able to retain for its own purposes the services of these people by its ability to pay them as much as is paid for the same services in other bureaus of the Government.

In view of the fact that the surplus of receipts over expenditures for the fiscal year just ended reaches a total of $119,907.54, it seems that a part of this surplus could be well employed in bettering the facilities which this Office affords to inventors.

ROOM.

The necessity for more room has been frequently urged in the reports of my predecessors, and it is an ever present necessity. Lack of room hampers all of our operations and causes waste of time and the destruction of valuable documents, for which there is no remedy under present conditions. There is no doubt in my mind but that if more space were accorded to this Office it would take the place, to some extent, of an increased force in more economical methods of work.

SCIENTIFIC LIBRARY.

This library, consisting of nearly 75,000 volumes (and of the greatest value to the Government and to inventors and attorneys), should be provided with steel stacks in addition to those already provided, so that it may be rendered more safe from fire. It is thought that $2,500 would be sufficient to complete this installation of steel stacks. The appropriation for the purchase of books is inadequate and should be increased.

Respectfully submitted.

F. I. ALLEN,
Commissioner.

The SECRETARY OF THE INTERIOR.

REPORT OF THE COMMISSIONER OF PENSIONS.

DEPARTMENT OF THE INTERIOR,
BUREAU OF PENSIONS,
Washington, D. C., September 10, 1901.

SIR: In submitting my report of the operations of the Bureau of Pensions for the fiscal year ended June 30, 1901, I have the honor to invite your attention to the several tables accompanying this report, which are numbered and arranged in the order followed in the report for the fiscal year 1900, thus facilitating a comparison of the work of the Bureau with that of former years.

In the report a brief reference to the leading features presented in the different tables will be made; and, as far as possible, the results attained during the past year will be so tabulated as to show what progress has been made in disposing of the arrears of work on hand at the close of each fiscal year since 1897.

TABLE NO. 1

is a statement showing the number of pensions allowed, increased, restored, renewed, and discontinued during the year, with their annual value, as well as the number of pensioners of all classes on the roll at the close of the year, and the annual value of the pension roll.

At the close of the fiscal year 1900 the number of pensioners on the rolls was 993,529. During the fiscal year of 1901 there were added to the rolls the names of 44,225 new pensioners; the number renewed and restored to the rolls was 3,567, making a total addition to the roll of 47,792 names, and the total number of pensioners on the rolls during the year 1,041,321. The number of pensioners dropped from the rolls during the same period was 43,586, leaving the total number June 30, 1901, at 997,735, being a net increase of 4,206, as compared with the number of pensioners on the rolls at the close of the fiscal year 1900.

This constitutes the "high-water mark" in the history of the Bureau, the number of pensioners on the rolls June 30, 1901, being over 4,000 in excess of the number reached in any previous year.

The annual value of the roll on June 30, 1900, was $131,534,544, and on June 30, 1901, it had increased to $131,568,216. The increase in the annual value of the roll was not very marked, but this may be accounted for by the fact that the death rate of the high-grade pensioners is proportionately greater than that of those receiving smaller rates of pension.

The annual value of each pension was decreased from $132.39 to $131.87, and this decrease has undoubtedly resulted from the same causes, viz, the death of pensioners who were receiving higher rates of pensions; also, by reason of the reduced number of general-law pensioners. The average annual value of pensions under the general law has increased from $167.53 to $168.67, and the average annual value of pensions under the act of June 27, 1890, has decreased from $108.28 to $108.09. This reduction is natural, right, and proper, as a result of the great number of widow pensioners placed upon the rolls and the increased number of invalid pensioners who heretofore had no ratable disability.

The average annual value of the Spanish-war pensions has dropped from $196.53 in 1899 and $169.10 in 1900 to $153.50 in 1901. The first allowances to this class of pensioners were made to those who were suffering from pronounced disabilities of a severe nature, while later on pensions were granted to those whose disabilities were of a less serious character, many of them being accorded the benefit of the doubt as to the existence of a pensionable disability, the same being on account of sickness rather than permanent disability.

The decrease is also largely due to the fact that the physical condition of most of those who served in that war is constantly improving with favorable surroundings, and it is fair to say that many of these pensioners will be ordered for reexamination at stated periods, and when the disability shall have ceased to exist in a pensionable degree the pension must stop according to law.

It will be noted that the average annual value of pensions of the war with Spain is still largely in excess of the average annual value of the pensions on account of the war of the rebellion.

The total number of pensioners, classified by different wars and laws, as compared with former years since 1897, is as follows:

	1901.	1900.	1899.	1898.	1897.
War, Revolutionary:					
Widows	4	4	4	5	7
Daughters	5	7	7	7	9
War, 1812:					
Survivors	1	1	1	3	7
Widows	1,527	1,742	1,998	2,407	2,810
Indian wars:					
Survivors	1,086	1,370	1,656	2,019	2,373
Widows	3,479	3,739	3,899	4,067	4,288
Mexican war:					
Survivors	7,568	8,352	9,204	10,012	10,992
Widows	8,109	8,151	8,175	8,143	8,072
Service after Mar. 4, 1861:					
General laws—					
Army invalids	293,186	305,980	316,834	327,080	336,299
Army widows	86,504	88,463	90,597	92,545	94,602
Navy invalids	4,489	4,622	4,721	4,833	4,788
Navy widows	2,298	2,314	2,293	2,300	2,375
Army nurses	650	646	653	655	663
Act June 27, 1890:					
Army invalids	422,481	415,265	405,987	399,366	378,609
Army widows	138,490	129,412	124,127	119,785	110,593
Navy invalids	15,633	15,392	14,925	14,543	13,831
Navy widows	6,621	6,314	6,139	5,944	5,766
War with Spain:					
General laws—					
Army invalids	3,344	822	117	.....	.....
Army widows	1,981	845	165	.....	.....
Navy invalids	211	60	6	.....	.....
Navy widows	68	28	11	.....	.....
Total	997,735	993,529	991,519	993,714	976,014

The pensioners on the rolls may be further classified as follows, viz:

	Survivors.	Invalid.	Widows.
On account of old wars prior to 1861	8,655	.....	13,124
On account of general laws, disability of service origin, after March 4, 1861 (mostly civil war)	.....	297,675	88,802
On account of act of June 27, 1890 (disability not due to service—civil war)	.....	438,114	145,111
Army nurses	.....	650	.....
On account of war with Spain	.....	3,555	2,049
Total	8,655	739,994	249,086

Under the general head of "widows" in the tables of this report are included minors and dependent parents and sisters and brothers. It should be stated, however, that when a widow is pensioned in her own right, and also on account of minor children of the soldier, only one pensioner is counted, as all the pension is paid to the widow.

It will be noted that there were 44,225 claims allowed during the year for original pension, and 3,567 for renewal and restoration. During the fiscal year of 1900 the number of original allowances was 40,645, and the number of renewals and restorations was 4,699, showing a material increase in the number of original claims allowed during the fiscal year 1901.

As predicted in my last annual report there has been a decrease in the number of general-law pensioners, and a corresponding increase in the number of pensioners under the act of June 27, 1890. This is caused by the difficulty in obtaining the necessary evidence to establish service origin of disabilities, owing to the lapse of time since the civil war; and it is believed that the decrease of the number of general-law pensioners and the increase of the number of pensioners under the act of June 27, 1890, will continue in a more marked degree in the future. This is the inevitable result of the progress of time which will render it more and more difficult to establish claims under the general law based upon obscure disabilities of service origin and their alleged sequelæ.

The following tabulated statements show the changes in the average annual values of pensions for the past eight years:

Year.	Annual value of roll.	Average value of original payments.	Original cases allowed.	Total first payments, all classes.	Total disbursements for pensions.
1894	$130,120,863	$229.48	39,085	$11,917,359	$139,804,461.05
1895	130,048,365	210.12	39,185	11,451,133	139,807,337.30
1896	129,485,587	211.30	40,374	11,289,278	138,214,761.94
1897	129,795,428	181.77	50,101	12,575,601	139,949,717.35
1898	130,968,465	206.36	52,648	15,542,914	144,651,879.80
1899	131,617,961	177.54	37,077	9,247,958	138,355,052.95
1900	131,534,544	168.05	40,645	9,828,525	138,462,130.65
1901	131,568,216	159.01	44,225	9,934,764	138,531,483.84

Year.	Average annual value of—			
	Each pension.	Each general law pension.	Each act of June 27, 1890, pension.	Each Spanish war pension.
1894	$134.20	$155.08	$115.12	.....
1895	133.99	158.39	112.15	.....
1896	133.39	161.05	109.55	.....
1897	133.17	162.04	109.25	.....
1898	131.79	163.21	108.11	.....
1899	132.74	165.70	108.99	$196.53
1900	132.39	167.53	108.28	169.10
1901	131.87	168.67	108.09	153.50

TABLE NO. 2

shows the number of pensioners of the various classes added to and dropped from the rolls during the year, with the cause and the number of each class remaining on the rolls June 30, 1901. This table constitutes the "balance sheet" between the Bureau and the eighteen pension agencies, and takes account of all the changes on the rolls of the agencies during the year.

For the purpose of preserving the proper balance between the additions and losses to the rolls, a new item has been added to this table which takes account of the number of pensioners apparently gained by reissues, additionals, and supplementals, and the resulting loss to the rolls by stopping the pension under one law for the purpose of placing the name of the same pensioner on the roll at a higher rate under another law.

The number of pensioners dropped from the rolls during the year by reason of death, remarriage of widows, minors reaching the age of

16 years, failure to claim pension for more than three years, and for all other causes, is as follows, as compared with former years:

Year.	By death.	Remarriage.	Minors.	Failure to claim.	Other causes.	Total.
1901	38,153	853	1,582	1,538	1,460	43,586
1900	35,809	909	1,402	1,728	3,486	43,334
1899	34,345	983	1,631	2,029	4,198	43,186
1898	33,691	1,369	2,124	3,031	6,436	46,651
1897	31,960	1,074	1,845	2,683	3,560	41,122
1896	29,393	1,141	1,684	2,552	9,323	44,093
1895	27,816	1,204	1,144	2,567	9,680	42,411

The footnote of this table shows that the number of minor children on whose account pension is paid is 49,394, a reduction of 2,601 as compared with last year. This decrease is caused by the large number of minor children who attained the age of sixteen years during the year as shown in notes "1," "2," and "3."

The following is a comparative statement of the number of pensioners, by wars, on the rolls at the close of the fiscal years 1898, 1899, 1900, and 1901, and showing increases or decreases as the case may be:

Wars.	1898.	1899.	1900.	1901.
War of Revolution	12	11	11	9
War of 1812	2,410	1,999	1,743	1,528
Indian wars, 1832–1842	6,086	5,555	5,109	4,565
Mexican war	18,155	17,379	16,503	15,677
Civil-war invalids	745,822	742,467	741,905	735,789
Civil-war widows	221,229	223,809	226,508	234,563
Spanish-war invalids	.....	123	882	3,555
Spanish-war widows	.....	176	873	2,049
Total	993,714	991,519	993,529	997,735
Changes	+27,700	−2,195	+2,010	+4,206

Changes in number of pensioners in each class from 1898 to 1901.

	Decrease.	Increase.
War of Revolution	3	.....
War of 1812	882	.....
Indian wars, 1832–1842	1,521	.....
Mexican war	2,478	.....
Civil-war invalids	10,033	.....
Civil-war widows	.....	13,334
Spanish war	.....	5,604
Total	14,917	18,938

Net increase, 4,021.

Prior to this year the "high-water mark" in the number of pensioners was reached at the close of the fiscal year 1898, when there were 993,714 names on the pension rolls. On June 30, 1901, the number of pensioners was 997,735, or 4,021 in excess of any previous year.

As an explanation or analysis of this increase it may be stated—

First. That there has been a net decrease in the number of pensioners for the old wars, for service prior to March 4, 1861, of 4,884.

Second. There has been a net increase for those pensioned on account of the war of the rebellion of 3,301.

Third. There has been an increase on account of the war with Spain of 5,604.

Fourth. The number of pensions granted to widows under the act of June 27, 1890, viz, 16,610, is nearly 4,500 in excess of those granted the previous year, the result of the act of May 9, 1900, amendatory of the former law.

TABLE NO. 3

is a statement of the number and amount of first payments on each class of certificates made during the year by pension agents to each class of pensioners in comparison with similar payments made during the fiscal year 1900. The total amount paid to pensioners as first payments upon the allowance of their claims was $9,934,763.54, or $106,238.47 more than the first payments during the year 1900.

This amount constitutes what may be termed "arrears" of pension, being the payment for the period which had elapsed between the filing of the claim or the death of the soldier, as the case may be, and the date of the quarterly payment preceding the allowance of the claim.

The average value of first payments was reduced from $168.05 in 1900 to $159.01 in 1901. This is a natural decrease, and is brought about by the progress which has been made by the Bureau in the adjudication of claims which has brought the work nearer up to date and has thus considerably shortened the "arrears" period. The decrease would have been still greater but for the fact that a considerable number of what are known as "Old minors' claims" were allowed during the year, under your instructions of May 26, 1900, and many of them carried large arrearages.

In 675 claims allowed during the year there was paid on the original allowance the sum of $1,010,699.20, or an average of nearly $1,500 in each case.

At the close of the fiscal year there remained in the hands of the different pension agents 10,109 certificates upon which no payments had been made, involving first payments amounting to $878,170.26. These certificates were issued so nearly the close of the year that the pension agents were unable to obtain vouchers from the pensioners in time to make the payments before the close of the year, and the above amount will therefore be paid out in said cases during the present fiscal year, although the allowance of the claims was properly credited to the fiscal year ended June 30, 1901, and if they could have been paid prior to June 30, 1901, the amount would have been charged to the appropriation for that year.

The fees paid to attorneys during the year out of the first payments to pensioners amounted to $591,245.22, being an increase of $73,868.90 over the previous year. This increase was occasioned by the allowance of Spanish war claims, in nearly all of which the attorneys had secured an agreement from the claimant for a $25 fee, although most of the claims required very little service on the part of the attorney aside from the preparation and filing of the declaration. The Commissioner is allowed no discretion in fixing the amount of the fee to be paid the attorney for his services in this class of cases, the matter being regulated by law.

TABLE NO. 4

is a statement showing the appropriations for pensions and the disbursements on account thereof for the fiscal year ended June 30, 1901, and the unexpended balances at the close of the year:

Appropriations for pensions	$144,000,000.00
Amount paid for pensions	138,531,483.84
Appropriation for medical examinations	700,000.00
Paid out for three-quarters of year	661,654.58
Appropriations for salaries and clerk hire, agencies	502,000.00
Paid out for salaries and clerk hire, agencies	484,520.21
Appropriations for rents, fuel, lights, and contingencies, agencies	43,230.00
Paid out for rents, fuel, lights, and contingencies, agencies	41,372.73

It will be noted that the disbursements for navy pensions were $3,787,693.03. The act making appropriations for the payment of invalid and other pensions of the United States provides that the appropriations for navy pensions shall be paid from the income of the navy pension fund so far as the same shall be sufficient for that purpose. The amount paid from the navy pension fund for the year was $357,966.09, or about 9 per cent of the total amount required for the payment of the navy pensions.

The available balance on June 30, 1901, from the amount appropriated for the payment of pensions was $5,471,985.17.

It will be noted that nearly the entire amount appropriated for the payment of examining surgeons had been expended during the three-quarters of the fiscal year, leaving only a small balance available toward payments on account of medical examinations for the months of April, May, and June, 1901.

The large number of orders for medical examinations issued during the year is attributable to the demands of claimants for increase over present ratings. At least 100,000 of the medical examinations held were unproductive, in that they failed to show an increase of disability warranting a higher rating than the claimants are receiving; but under the present system and practice, just as soon as the application for increase is adjudicated—allowed or rejected—or within thirty days, as a rule, another application is filed through the efforts of the energetic and enterprising attorney, and the case again takes its place in the pending files for another medical examination and another adjudication. Many cases are found in which from ten to twenty applications for increase have been filed and as many medical examinations held, and yet no increase of disability has been shown since the date of the original adjudication of the claim.

Under the established system practically no limit is imposed upon the filing of applications for increase, and consequently no limit to the orders for medical examinations can be established.

TABLE NO. 5

shows the amount disbursed by each of the 18 United States pension agencies during the fiscal year, as shown by their accounts current.

This statement embraces all the payments made at the different agencies, and shows in separate columns the amounts paid for pensions, for fees for examining surgeons, for salaries of pension agents, for

clerk hire, rents, fuel, lights, and contingent expenses at the agencies, the entire amount being $139,582,231.98, an increase over the previous year of $200,709.25.

It may be noted that the amounts disbursed by the different agencies range from $2,743,320 at Concord, N. H., to $16,132,946 at Topeka, Kans.

TABLE NO. 6

shows the amounts paid during the year at the different pension agencies on account of pensions under the general law. The amount was $67,867,233.84, being a decrease of $1,790,252.82 from the amount paid under this head during the previous fiscal year. The steady decrease in the number of pensioners under the general law will cause a corresponding decrease in the amount of payments represented in this table.

TABLE NO. 7

is a statement of amounts paid by the different pension agents during the fiscal year 1901 for pensions on account of the war with Spain.

The amount paid to these pensioners was $1,175,225.76, which is an increase over last year's payments of $842,320.51. The payments to the persons embraced in this table will materially increase for some years to come.

TABLE NO. 8

shows the amount paid during the year for pensions under the act of June 27, 1890, as amended by the act of May 9, 1900.

The payment to this class of pensioners was $66,973,481.15, being an increase of $1,207,401.80 as compared with the amount paid during the fiscal year 1900.

The number of pensioners embraced in this table will show a steady increase in about the same proportion as the number of pensioners under the general law will decrease, for the reason that title to pension under the act of June 27, 1890, is not based upon disability of service origin but upon present disability, regardless of the time of its development.

TABLE NO. 9

shows the amount of payments made during the year to the following classes of pensioners:

	Survivors.	Widows.	Total.
War of 1812	$96.00	$210,760.04	$210,856.04
Indian wars 1832–1842	111,973.91	351,016.59	462,990.50
War with Mexico	921,052.18	794,320.27	1,715,372.45

As compared with previous years the decrease in the number of pensioners embraced in this table and the amounts paid to them is marked, and, as all these beneficiaries have reached a ripe old age, it is but reasonable to predict that their numbers will continue to decrease very rapidly. To show, however, that the survivors of these wars and their widows have not been forgotten in the distribution of the bounty

of the Government, it will be seen that the survivors of the war of 1812 and their widows have received in the last thirty years the goodly sum of $44,841,647.93; those whose pensions have been based on service in the war with Mexico have been paid a total of $30,201,186.69, while the survivors of the Indian wars and their widows have received $5,402,054.55.

The total payments to the beneficiaries included in this table for the fiscal year 1901 was $2,389,218.99.

TABLE NO. 10

is a classified statement of the number of pensioners on the rolls of each agency as compared with the number on the rolls June 30, 1900, and giving the losses and gains in each class.

NET INCREASES.

Army nurses		4
War with Spain:		
Army invalids	2,522	
Army widows	1,136	
Navy invalids	151	
Navy widows	40	
		3,849
Act of June 27, 1890 (civil war).		
Army invalids	7,216	
Army widows	9,078	
Navy invalids	241	
Navy widows	307	
		16,842
Total		20,695

NET DECREASES.

General law:		
Army invalids	12,794	
Army widows	1,961	
Navy invalids	133	
Navy widows	16	
		14,904
War of 1812, widows		215
War with Mexico:		
Survivors	784	
Widows	42	
		826
Indian wars:		
Survivors	284	
Widows	260	
		544
Total		16,489

Showing a net increase in the number of pensioners of 4,206.

TABLE NO. 11

shows the disbursements for pensions, fees of examining surgeons, cost of disbursement, salaries, and other expenses of the Pension Bureau and its agencies, and the number of pensioners on the rolls at the close of each fiscal year since July 1, 1865.

The disbursements since July 1, 1865, have been as follows, viz:

For army pensions	$2,608,004,258.63
For navy pensions	58,900,330.60
Total for pensions	2,666,904,589.23
For fees paid examining surgeons	17,375,192.13
For cost of disbursing	13,140,883.73
For salaries in Bureau	48,696,646.50
For other expenses	8,610,616.60
	2,754,727,928.19
Amount paid for army and navy pensions from July 1, 1790, to June 30, 1865	96,445,444.23
From July 1, 1865, to June 30, 1901	2,666,904,589.23
Total for pensions	2,763,350,033.46

The last column in this table gives the number of pensioners on the rolls at the close of each fiscal year since the close of the war of the rebellion.

No exhibit contained in this report speaks so eloquently of the liberality of the Government in the distribution of its bounty to its defenders and those who are dependent upon them, as this table does, and the figures given therein are deserving of careful study.

TABLE NO. 12

is a statement showing the number of claims for original pension filed and allowed each year since July 1, 1861.

The number of original applications filed during the fiscal year 1901 was 58,373. These applications were filed by 45,860 claimants, many of them having availed themselves of the privilege accorded them by law of filing and prosecuting separate claims under different laws.

The number of original claims allowed during the year was 44,225, divided among the following classes, viz:

	Invalids.[1]	Widows.	Total.
For disabilities incurred in service (war of rebellion)	653	3,067	3,720
Act of June 27, 1890	19,319	16,610	35,929
War with Spain	2,795	1,240	4,035
Army nurses	25		25
War of 1812		3	3
Indian wars (1832–1842)	17	132	139
Mexican war	15	352	367
Old wars (prior to 1861)		7	7
Total	22,814	21,411	44,225

[1] Survivors.

It thus appears that the number of new applicants for pension during the fiscal year 1901 was but 1,635 in excess of the number of new pensioners placed upon the rolls during the same period.

In my annual report for the year 1900 I predicted that during the fiscal year 1901 "filing of new claims will be largely in excess of those filed in any year since 1894, owing to the enactment of new legislation by the present Congress." An examination of said item in this table shows that my prediction was fully verified.

TABLE NO. 13

is a statement of the number of pensioners in each State and Territory of the United States, in each insular possession, and in each foreign country on the rolls June 30, 1901, and the amount paid for pensions during the fiscal year 1901 in each State and Territory, in each insular possession, and in each foreign country. The following summary shows the residence of and payments to pensioners during the year:

	Number.	Amount.
Pensioners residing in States and Territories, and payments to them during the year	993,116	$137,753,685.20
Pensioners residing in insular possessions and payments to them during the year	72	10,312.89
Pensioners residing in foreign countries and payments to them during the year	4,547	641,161.65
Total	997,735	138,405,159.74
Payments by Treasury settlements		126,324.10
Total payments on account of army and navy pensions		138,531,483.84

There has been an increase of 90 in the number of pensioners residing in foreign countries, and the increase in the amount paid to them was $10,927.35 over last year.

At the close of the fiscal year 1900, 69 pensioners were residents of our insular possessions, and they were counted with those residing in foreign countries. In this table the 72 pensioners residing in our insular possessions are counted under their proper head.

TABLE NO. 14

shows, by classes, the different monthly rates paid to pensioners under the general law, and the number at each rate on the rolls June 30, 1901.

It would appear from this table that there are 17 invalid pensioners rated at less than $6 per month, which was made the minimum rate of pension by the act of March 2, 1895. The issue of said certificates at lesser rates than $6 per month is fully explained in the footnote of the table.

Invalid pensioners receiving a pension in excess of $100 per month, and widows pensioned at more than $30 per month, are pensioners by special acts of Congress, and the irregular rates in the table below $100 per month arise from combination of rates for disabilities as of different ranks in the service, and also by the addition of service pension in the Navy to the regular pension for disability.

TABLE NO. 14A

shows, by classes, the different monthly rates paid to pensioners under the act of June 27, 1890, and the number at each rate on the rolls June 30, 1901.

It will be remembered that the maximum rate to invalids under said act is $12 per month and to widows $8 per month. The invalid cases in this table at rates in excess of $12 per month and the widows' rates in excess of $8 per month are fully explained in the footnote.

The number of invalid pensioners receiving the maximum rate of $12 per month is still largely in excess of the number pensioned at any of the lesser rates. This rate is provided for disabilities which exist in a degree entirely incapacitating the pensioner from earning a support by manual labor and corresponds to the $30 rate under the general law, at which rate there are only 15,206 invalid pensioners on the rolls.

A comparison of this table with that of the previous year shows a decrease of 3,428 in the number of $6 pensioners, while the number of $8 pensioners has increased from 133,899 in 1900 to 138,293 in 1901, and there has been an increase of 6,596 in the number of $10 pensioners. There has also been a marked increase in the number of pensioners embraced in this table who are receiving more than $12 per month.

TABLE NO. 14B

is a statement showing, by classes, the different monthly rates of pension paid on account of the war of 1812, Indian wars (1832–1842), war with Mexico, war with Spain, and the army nurses employed during the war of the rebellion.

Attention is invited to the footnote of this table, which is explanatory of the rates in excess of those fixed by the acts under which the pensions were originally granted.

The only surviving pensioned soldier of the war of 1812 is Hiram Cronk, of Ava, Oneida County, N. Y., who is 101 years of age. The roll, however, contains the names of 1,527 widows of soldiers of that war, being a reduction of 215 since last year.

There are on the rolls the names of 1,086 survivors and 3,479 widows on account of Indian wars (1832–1842), and of 7,568 survivors and 8,109 widows on account of the war with Mexico.

This is a reduction from last year of 284 in the number of survivors and 260 in the number of widows on account of the Indian wars, and of 784 survivors and 42 widows on account of service in the war with Mexico.

The table shows an increase over last year in the number of pensioners on account of the war with Spain of 2,673 invalids and 1,176 widows, and the number of army nurses who are drawing pensions has increased from 646 to 650.

TABLE NO. 15

gives the names, ages, and places of residence of the surviving widows and daughters of Revolutionary soldiers on the pension rolls June 30, 1901.

During the fiscal year 1901 the following deaths occurred among this class of pensioners, viz:

Eliza Sandford, pensioned as the daughter of William Sandford, and Ann M. Slaughter, pensioned as the daughter of Philip Slaughter.

There remain on the rolls the names of four widows and five daughters of Revolutionary soldiers.

TABLE NO. 16

is a report of the pension certificates issued during the fiscal year ended June 30, 1901.

The following summaries will show the issues by classes, viz:

	Invalid.	Widow.	Total.
Original:			
Old wars	22	494	516
War of rebellion—			
General laws	653	3,067	3,720
Act of 1890	19,319	16,610	35,929
Army nurses	25	.....	25
War with Spain	2,795	1,240	4,035
Total	22,814	21,411	44,225

Restoration and renewals.	
Old wars	5
War of rebellion—	
General laws	1,288
Act of 1890	2,262
War with Spain	12
Total	3,567
Total original and restoration	47,792
Straight increases	35,939
Reissues	2,243
Restorations renewals, reissues, and additionals to change class	6,922
Supplementals	219
Duplicates	2,673
Accrued	13,812
Grand total	109,668

The total number of certificates issued during the past eight years was as follows, viz:

1894	80,213
1895	96,337
1896	90,640
1897	94,454
1898	98,574
1899	89,054
1900	105,591
1901	109,668

Table No. 17

is a statement of the work of the mail division for the fiscal year 1901. This division has charge of the receipt and distribution of all mail coming to the Bureau and of the dispatch of the mail going out of the Bureau; also of the mailing of blank applications and copies of the laws and regulations to applicants.

The report is in detail and shows that 5,437,062 pieces of mail were handled in the division during the year, which is a fair indication of the magnitude of the work performed by the Bureau.

Table No. 18

shows the work of the army and navy survivors' section, recently transferred to and now a part of the record division.

New rules have been promulgated regulating the practice of furnishing names and post-office addresses of comrades, which it is believed will render this service more beneficial to the Bureau and to claimants.

TABLE No. 19,

with accompanying exhibits, shows the total number of claims pending before the Bureau June 30, 1901.

At the close of the fiscal year a careful inventory was made of the pending files, the result of which appears in this table.

It was found that there were pending 403,569 claims of all classes, including 24,206 claims for accrued pension due deceased pensioners and 33,532 claims arising out of service in the war with Spain and the insurrection in the Philippine Islands. Of the number of pending claims 228,534 were filed by persons who have heretofore been granted a pension and who are now seeking an additional allowance. The following table shows the condition of the pending files for the past five years, viz:

Number of claims pending June 30—	
1897	578,099
1898	635,059
1899	477,239
1900	437,104
1901	403,569

A large number of these pending claims are duplicate claims, i. e., two or more claims by the same claimant under different laws, and when one of the claims is favorably adjudicated the claim filed by the claimant under another law, or the claim for accrued pension, as the case may be, is generally adjudicated at the same time.

Included in the foregoing are 41,399 claims for "new disabilities." These are claims in which a pension has been granted the soldier or sailor for disability or disabilities of service origin, and in later years other disabilities have developed which the claimants think had their origin in the service and for which an additional pension is claimed. These claims are mostly based upon obscure disabilities that have come on since the war, and claimants find it almost impossible to furnish competent evidence connecting the disabilities with the military service. When a prima facie case, however, is made out in this class of cases, the claimant is usually accorded the benefit of a special examination before the claim is finally adjudicated.

It is also found that there are but few claims in the Bureau that can be termed "original" (those in which no pension has ever been allowed) which have been on file more than a few months that have not received action looking to their adjudication. There are many claims under the general law that are pending now and have been for years which have been rejected from one to numerous times each because of on title on account of disability incurred in service and line of duty, and many of these claims are based upon a service of less than ninety days. There are comparatively few claims in the pending files for original pension for disability incurred in the service (general law) in which a pension has not already been granted under the act of June 27, 1890, and many of these, having been granted the maximum rate under that act, are now claimants for a higher rate under the general law for disabilities which they allege as of service origin.

Both systems of pensioning—general law and act of June 27, 1890, as amended by the act of May 9, 1900—are subjected by the law to well-defined conditions and restrictions, and it would be strange indeed if

all that apply should be pensioned, and yet after forty years the results show that comparatively a small percentage of claimants fail to establish title. If they fail in securing pension under the general law for disability incurred in service, they are afforded relief under the act of June 27, 1890, and amendments, for present disabilities not of service origin.

There are now on the pension rolls the names of 735,789 invalid pensioners, exclusive of those based on service in the war with Spain, and nearly all of these are pensioners on account of the war of the rebellion.

According to the mortuary tables and estimates prepared in the War Department, there should now be living 965,313 survivors of the war of the rebellion (excluding deserters), indicating that there are over 200,000 survivors of that war who have never been pensioned, only about 25 per cent of whom have filed claims for pension, and probably many never will apply unless other than a disability pension shall be offered, for the reason that they do not like to make the necessary oath that they are incapacitated by diseases of a permanent character to an extent as to disqualify them from earning a living, and neither of the two systems of pensioning grants pensions to survivors of the war of the rebellion except for disease or other disability existing in a pensionable degree.

The number of claims pending for original invalid pension, nearly all based upon service in said war, and in many of which the claimant has no pensionable status, at the close of the fiscal year was:

Under general law	13,140
Under act of June 27, 1890	35,214
Total	48,354

This is exclusive of 6,577 claims in which the soldier has died since filing his claim and a claim has been filed by his widow or dependents. The actual number of soldiers represented by these claims is 44,318, indicating that there are more than 150,000 survivors of the war of the rebellion who have never applied for pension.

It appears that of the 403,569 claims of all kinds pending, 33,532 are claims on account of the war with Spain; 24,296 are claims for accrued pension due deceased pensioners; 6,577 are claims that were filed by soldiers who have since died, and their widows or dependents are completing the claims for the pension which may have accrued therein; 11,798 are claims of invalids that have never been adjudicated; 32,520 are original invalid claims that have been rejected from one to many times each, claimant failing to show title; 41,399 are claims for "new disabilities," claimant having been pensioned and asking recognition for other disabilities of service origin, and 228,534 are claims for increase, reratings, reissue, restoration, additional, etc.

Attention is invited to the small number of claimants (11,798) for account of the war of the rebellion who have never had an adjudication of their claims; many of them have had claims pending for years, but through no fault of the Bureau. About one-fifth of the number were filed during the past year, and the necessary evidence has not yet been furnished to complete them; about 40 per cent, or two-fifths, of the number were filed prior to 1896, and nearly 15 per cent of the 11,798 are known to have defective military records.

The eastern division has the largest number of this class of pending

claims, viz, 3,965, and of this number 1,668 were filed prior to 1896 and extending well back toward the close of the war. They have been kept alive in various ways through the energy and persistence of the attorneys. As an illustration, invalid claim No. 350761 was filed March 11, 1880; only the declaration and attorney's-fee agreements were filed. Calls were made for identification of claimant and the necessary evidence to complete the claim and an order for the claimant's medical examination was issued and sent to the attorney, but the claimant failed to report for examination.

In 1884 the claimant is found to be represented by another attorney. The jacket on case shows several indorsements of calls on the attorney for the address of the claimant. In 1886 another order was issued and sent to the attorney for the claimant's medical examination, and again claimant failed to appear before the surgeons, and the attorney so informed. In 1887 and 1888 the attorney was advised that the claimant had not been heard from. In 1889 notice was given the attorney that no evidence had been filed in the case.

All this appears in the general law claim, and the facts are submitted to show how industrious the attorney has been to meet the requirements of the practice of keeping the claim alive, when it was evident that the claimant himself had entirely abandoned the prosecution of the claim.

The same claimant, through another attorney, filed an application under the act of June 27, 1890, only the declaration and fee agreements having been filed. This attorney has by industry kept this claim alive by making inquiry from time to time of the Bureau as to status of claim or as to the post-office address of the claimant. The latter was given to the attorney the last time December 11, 1900.

Thus the case is kept in the files as a pending claim, although the claimant may be deceased, as his several attorneys seemingly have failed to get him before the surgeons for examination. This claim is twenty-one years of age, and is only a sample of many cases that remain in the pending files. For the reasons stated, and many others that might be given, it is believed that the system and practice are wrong. When a claim is filed it should be by law required that the claim must be established or completed within five years from the date of filing, and when not prosecuted to a successful issue within that period it should be barred by limitation.

There is no way in which claims of this character can be effectually disposed of under the present system and practice, and these cases must necessarily remain in the pending files for an indefinite period; and a large portion of the time of the examiners is consumed in handling the cases over and over again, with no beneficial results to the claimants.

It is a source of gratification that the number of pending claims has been materially reduced during the past year, and that the work on nearly all classes of claims has been practically brought up to date.

TABLE NO. 20

comprises the report of the operations of the special examination division and the condition of the work in that branch of the service at the close of the fiscal year.

On June 30, 1900, there were 9,794 cases awaiting action in that division, and during the year 13,587 additional cases were referred,

making a total of 23,381, of which number 13,379 were specially examined and referred to the proper divisions for final adjudication, leaving 10,002 cases in the division at the close of the fiscal year.

This division is a valuable adjunct to the work of the Bureau, and the results attained thereby are most beneficial both to the Government and to the deserving claimants, many of whom are enabled to establish the validity of their claims through the assistance rendered by this branch of the service when otherwise their claims would fail for want of facilities to locate the necessary witnesses and obtain their testimony.

It is also believed that the effect of the work performed by the special examiners, and their being stationed in different portions of the country often deter wrongdoers from presenting false and fraudulent claims for pension, and stop many from the commission of fraudulent acts in matters relating to pensions.

TABLE NO. 21

is a detailed report of the work of the law division during the past year, in which the methods of those who are engaged in illegal practices against the pension laws are fully set forth.

It appears from this report that of 300 indictments found against offenders, 250 were tried in the courts, resulting in 226 convictions, and that there are now 230 cases in the hands of the United States attorneys awaiting their action.

There are now 19,992 attorneys entitled to practice before this Bureau, an increase of 776 since last year.

The act of March 3, 1899, provides for payment to the wife or minor children of one-half the pension of a soldier or sailor who is an inmate of a soldiers' home, or who has deserted his family for a period of over six months. These claims are settled in the law division, and during the past year 698 claims were allowed under said act, leaving 1,404 claims pending on June 30, 1901.

Attention is respectfully invited to the recommendations contained in this report, viz:

First. A complete revision of the roster of attorneys practicing before the Bureau, and a more careful scrutiny in future of the qualifications of those who apply for admission.

Second. The enactment of a law providing that in claims under the act of March 3, 1899, for division of pension, and in claims for accrued pension, a specific fee be paid by the United States pension agents upon certification of the Commissioner of Pensions, and making the receipt of any other fee unlawful.

Third. That the act of August 7, 1882 (relating to proof of legal marriages in pension claims), should be amended so as to enable this Bureau to determine the status of those who claim pension as the widows of soldiers or sailors by a standard that would be uniform throughout the entire country, in order that many inequalities in the practice based upon existing law would be removed, and justice done many worthy claimants.

Fourth. Amendment of the last clause of section 2 of the act of February 26, 1881, relating to the payment of balance of pension money in the hands of the treasurer of a soldiers' home, at the time of the

death of a member, to his wife or children; or, in default of either, to his legal representatives, so as to read—

and in case of his death at the Home, the same shall be paid to his widow, minor child or children under the age of sixteen years, dependent mother or father in the order named; or, in default of either, such balance shall escheat to the United States.

The above recommendations are earnestly commended to your favorable consideration, as well as the reasons set forth in this report for the changes suggested.

TABLE NO. 22

shows in detail the special laws passed by the second session of the Fifty-sixth Congress, numbering 707; of this number 466 were for increase over ratings granted under the general laws through this Bureau and 241 granted original pensions to claimants that had no pensionable status under laws governing the Bureau.

The first session of this Congress passed 684 special acts granting pensions, making a total of 1,391 special acts for the Congress.

The following summary shows the number granted at each rate specified, viz:

Recapitulation, special acts, Fifty-sixth Congress.

FIRST SESSION

Granting—		Granting—	
$75	1	$17	19
72	2	16	8
60	1	15	12
50	59	14	2
45	3	12	176
40	35	10	4
36	5	8	34
35	7	Inoperative—	
30	131	$20	2
25	21	12	1
24	80	Rate not yet determined	3
22	3		
20	71	Total	684
18	4		

Net increase, exclusive of inoperative acts and those in which rate has not yet been determined: Per month, $9,813.25; per annum, $117,759.

SECOND SESSION.

Granting—		Granting—	
$100	1	$22	2
72	1	20	78
60	3	18	3
50	52	17	38
45	2	16	10
40	31	15	14
36	11	14	3
35	3	12	189
32	1	8	32
30[1]	126	No benefit	1
25	24		
24	82	Total[1]	770

Number of acts originated in House	396
Number of acts originated in Senate	311
Total	707

[1] Including two special acts inoperative.

Net increase exclusive of two inoperative special acts and one special act, no benefit: Per month, $10,016; per annum, $120,192.

It may be stated that the largest number of private pension bills passed by any previous Congress was 1,388, passed by the Fifty-first Congress.

TABLE NO. 23

is a statement showing the number of applications for army pensions under the general laws filed during the fiscal year ended June 30, 1901.

The following summary shows the different classes of claims embraced in this table, viz:

	Invalids.	Widows, etc.	Total.
Original (new claimants)	943	5,721	6,664
Original (act of 1890 pending)	476	847	1,323
Original (now pensioned under act of 1890)	647	810	1,457
Increase			41,406
Duplicates	1,026	931	1,957
Army nurses			28
Total general laws (except Spanish war)			52,835

It may be noted that of the above number of applications filed during the year only 6,692, or about 12⅝ per cent, were filed by new claimants, the balance coming from claimants who are already pensioned or who had claims pending under another law.

TABLE NO. 23A

is a statement showing the number of applications for army pensions under the act of June 27, 1890, as amended by the act of May 9, 1900, filed during the last fiscal year.

A summary of the cases in this table shows the following classes of claims, viz:

	Invalids.	Widows, etc.	Total.
Original (new claimants)	7,571	15,482	23,053
Original (general-law claims pending)	1,325	2,794	4,119
Original (general-law claims allowed)	4,240	292	4,532
Increase			72,293
Duplicates	29,041	5,804	34,845
Total			138,852

The number of new claimants is only about 16 per cent of the whole number of applicants embraced in this table.

TABLE NO. 23B

is a statement showing the number of applications for army pensions, on account of the war with Spain, filed during the fiscal year ended June 30, 1901.

The following summary shows the different classes, viz:

	Invalid.	Widows, etc.	Total.
Original (new claimants)	12,413	1,744	14,157
Increase			627
Duplicates	774	102	876
Army nurses			4
Total			15,664

This table also shows that there were filed 3,417 claims of remarried widows under the act of March 3, 1901, including duplicates.

TABLE NO. 23c

shows the number of applications for army pensions received and forwarded by the record division to the different adjudicating divisions during the fiscal year 1901.

The total number of applications received was 210,768, an increase over last year of 36,513. Of this number only 43,906, or about 20 per cent were filed by new claimants, including those filed on account of the war with Spain.

There were filed during the year 114,473 new applications for increase of pension.

The large number of "duplicate" applications reported in the above tables are for original and increase pensions and come from claimants who file an application through two or more attorneys, thinking possibly that the chances of success are enhanced by a multiplicity of counsel.

TABLES NOS. 24 and 24a

show the number of claims received and recorded in the old war and navy division during the year. There were filed 2,107 claims of all classes based upon service prior to March 4, 1861; 6,182 for service in the Navy subsequent to March 4, 1861, including the war with Spain, and 122 claims for bounty land.

The following summary shows the number of applications for navy pensions filed during the year, viz:

	Invalids.	Widows.	Total.
General law:			
Original (new claimants)	139	167	306
Original (pending under act of June 27, 1890)	46	18	64
Original (now pensioned under act of June 27, 1890)	48	6	54
Increase			495
Total			919
Act of June 27, 1890:			
Original (new claimants)	537	652	1,189
Original (general-law claims pending)	47	17	64
Original (now pensioned under the general laws)	58	2	60
Increase			3,005
Total			4,318
War with Spain:			
Original (new claimants)	401	90	491
Increase	13		13
Total			504
Increase and accrued		441	

TABLE NO. 25

is the report of the medical referee, and it shows that the work in the medical division at the close of the fiscal year was up to date, not a single claim requiring medical action remaining in his division, aside from a few appeal cases.

The medical division examined and took action in 230,708 cases during the year, being an average of nearly 860 claims for every working day in the year. This result was accomplished with a reduced force of 65 physicians, as against 74 last year.

Your careful attention is invited to the recommendation of the medical referee as to the necessity for an increase in the force of medical examiners in his division, for an increase in the salaries of the medical examiners, and for an appropriation of $250 to be expended in the purchase of standard works on medicine, surgery, and pathology.

Earnest and persistent efforts have been made to secure better reports of medical examinations from the examining surgeons of the Bureau, with but a limited measure of success. The steps taken in this direction and the reasons for the failure in many instances to obtain full and correct reports of examinations are fully set forth in the report of the medical referee, which merits careful consideration.

It appears that during the fiscal year 1901, 227,880 orders for medical examinations were sent out to claimants, and 189,920 certificates of examination were received and applied to the cases to which they belonged; 26,762 certificates were returned to the boards of surgeons for amendment; 431 certificates were rejected, and 29,449 claimants failed to appear for examination.

The amount of accounts for medical examinations approved for payment during the year was $829,569.91.

TABLE NO. 26

consists of the report of the chief of the board of review, showing the work done during the fiscal year ended June 30, 1901.

The number of cases acted upon by the board of review during the year was 267,469, of which 107,144 were admitted, 120,090 rejected, 37,188 returned to the adjudicating divisions for further evidence, and 3,047 referred to other divisions for action prior to final adjudication.

The number of cases returned for further evidence was less than 14 per cent of the number examined, as against 18 per cent last year and 21 per cent for the year preceding. This shows a steady improvement in the work of the adjudicating divisions in the preparation of claims for final settlement and that the action taken in pending claims is becoming more uniform throughout the Bureau.

It will be noted that of the number of claims rejected (120,090) 71,324, or about 60 per cent, were claims for an increased allowance, and 97,842, or about 80 per cent of the entire number, were rejected on medical grounds, the majority of which were cases in which the medical examinations found no ratable disability or no disability warranting a higher rate than the pensioner was then receiving.

Attention is also invited to the fact that 9,836 rejections were of a formal character, arising from the fact that claimants had filed claims under each law, and having made their election by accepting pension under one law their claims under the other law are entered up for rejection, so as to take them out of the pending files.

The following summary shows the action taken by the board of review in original claims during the past four years:

Year.	Admitted.	Rejected.	Total.
1898	52,648	48,175	100,823
1899	37,077	46,345	83,422
1900	40,645	44,670	85,315
1901	50,904	48,361	99,265
Total	181,274	187,551	368,825

APPEALS.

The Department, through the board of appeals, acted in 5,428 appealed claims during the year; affirmed the action of the Bureau in 4,471 cases, and reversed the Bureau findings in 546 cases.

The causes of reversal are shown in the following abstract, viz:

To grant rate (original pensions):		
General law	3	
Act of June 27, 1890	77	
	—	80
To grant increase:		
General law	88	
Act of June 27, 1890	79	
	—	167
Service origin of disability or death cause		68
Reissue to change date of commencement, act of March 6, 1896		13
Question of valid marriage and legal widowhood		32
Presumption of death after seven years' absence, act of March 13, 1896		19
Dependence, widow, act of June 27, 1890		7
Violation, act of August 7, 1882		3
Title of deserted wife, act of March 3, 1899		4
Adjudication dependent mother's claim, act of June 27, 1890, instead of 4707 R. S.		2
Question of prior voluntary Confederate service		3
Desertion from prior or subsequent service		5
Question of practice and other grounds not specified herein		35
For special examination		35
For test medical examination		19
For further consideration and readjudication		54
Total		546

The last three causes of reversal (108 cases) were not strictly reversals, but were cases returned for further examination.

The following is a comparative statement of appeals for the ten years preceding the fiscal year 1901:

Year.	Total number filed.	Number acted upon.	Reversals.	Percentage of reversals.
1891	4,696	4,006	409	0.1021
1892	5,074	5,980	566	.0946
1893	5,410	5,312	551	.1037
1894	3,264	6,307	375	.0593
1895	5,227	6,576	1,244	.1890
1896	5,122	4,605	561	.1218
1897	5,862	5,075	422	.0831
1898	13,307	5,406	481	.0889
1899	9,647	5,628	394	.0700
1900	8,185	6,123	378	.0617
1901	6,315	5,428	546	.1006

TABLE NO. 27

is a statement showing the value of the pension roll June 30 of each year since 1890 and the amount paid the following fiscal year. The annual value of the roll on June 30, 1899, was greater than ever before or since.

TABLE NO. 28

shows the number of employees, and amounts appropriated for salaries and for special examinations from July 1, 1864. There have been no changes in the above items since 1899.

TABLE NO. 29

is the report of the chief clerk of the Bureau and contains much information of interest regarding the work under his immediate supervision, and his statement as to the efficiency of the employees of the Bureau is justified by the character and amount of the work accomplished during the year.

* * * * * * *

SUMMARY.

It affords me pleasure to say that much good work has been accomplished by the Bureau during the past year, and the improved methods and better system instituted in the several divisions will, it is believed, be productive of better results for the future. Careful, diligent, and considerate attention has been given by the respective divisions to the several branches of the work to the end that reliable records and results may be had; monthly inspections of the files of pending claims have been instituted, with the result that many claims are sent forward for adjudication that have been pending a long time, and finally, at the close of the year a large force was assigned from each division to carefully search, inspect, and make a complete inventory of all pending claims, in order that it might be determined what amount of work is before us for the coming year, so that immediate preparation could be made to meet all demands upon the office force in keeping the work of the Bureau current.

It has been the aim of the productive force of the Bureau during the past four years to attain as nearly as possible in the work assigned to it uniformity, system, regularity of methods, and orderly procedure. It is fair to say, however, that a very large percentage of the time of the force engaged in adjudicating claims has necessarily been taken up in the working over of thousands of claims for "rerating" in which there was no title to additional pension under existing laws; also in the consideration of many thousands of claims filed under the act of March 6, 1896, in which no title exists, and therefore no benefit could accrue from the filing of such applications, and many other similar claims where the want of title prevents favorable action; and yet much time and labor must necessarily be consumed in the orderly disposition of such claims and in furnishing full and detailed statements of the action of the Bureau to claimants, attorneys, and others.

I make this statement for your information to show that much of the time taken up in the adjudication of claims is unproductive of pensions or benefits, while on the other hand a very large number of rejections is shown in this class of claims.

It must be remembered that the year just closed covered a national campaign and inauguration, and the Bureau necessarily lost time by reason of the use of the building for the ceremonies connected with the inauguration; hence, all things considered, I think that the result of the year's work or efforts of the Bureau are most gratifying. I shall predict that with existing laws and established practice there will not be nearly so many "original" pensions granted during the present fiscal year for the reason that there are not as many claimants whose claims will be completed during the year. It is fair to say, however, that it will be my earnest effort to keep the work on original claims current, so that immediately upon their completion they will be taken up for adjudication.

It is difficult to predict the possibilities of the future with regard to the filing of original claims for pension by the survivors of the war of the rebellion. About 45,000 of them now have such claims pending, while it is believed that about 155,000 survivors of that war have never filed an application. Another element of uncertainty will be found in the number of those who had been charged with desertion (121,000), many of whom have been relieved from the charge and thus restored to a pensionable status by legislation.

Last year a bill was introduced in Congress to relieve all those having the charge of desertion against them. Should this become a law it would confer title to pension upon at least 75,000 additional survivors, and upon many dependent relatives.

During the year the army and navy survivors' division, as a division, was abolished and consolidated with the record division, the two divisions naturally belonging together from the class of work assigned to them.

Congress authorizes the employment of 1,740 persons in all the branches of the Bureau service, and this number is generously sufficient to meet all demands of the service. About 25 employees of the Bureau are detailed in other bureaus or branches of the Government service.

The principal officials of the Bureau are men who served in the Union Army. Seventeen of the 18 disbursing agents served in the Union Army; there are 601 ex-Union soldiers and sailors, 64 widows of ex-Union soldiers and sailors, and in addition thereto many sons and daughters of ex-Union soldiers and sailors employed in the Bureau and Bureau service, each and all desirous of doing promptly and generously their duty under the law in giving the full measure of generosity of the Government to its lawful beneficiaries.

In conclusion, I will say that all of the accompanying tables and reports merit careful attention, as they show in detail the operations of the Bureau in all its branches during the year, and they also show that the force of employees has been diligent and zealous in the performance of the important duties imposed upon them. In my efforts to dispose of the work which was in arrears and bring it up to date, and in promoting the interests of the service, I have been cordially seconded by my assistants, and by the chiefs of division, as well as by

the employees under their supervision, and I desire to express my gratitude to all for their efforts in producing the gratifying results presented in this report.

Respectfully submitted.

H. CLAY EVANS,
Commissioner.

The SECRETARY OF THE INTERIOR.

REPORT OF THE COMMISSIONER OF RAILROADS.

DEPARTMENT OF THE INTERIOR,
OFFICE OF COMMISSIONER OF RAILROADS,
Washington, D. C., November 1, 1901.

SIR: In compliance with the provisions of the act of Congress creating this Bureau, approved June 19, 1878 (20 Stat., 169, sec. 3), I have the honor to submit the following report for the year ended June 30, 1901, on the physical and financial condition of the property and affairs of the several railroad companies which have received subsidies from the United States, and which have submitted such reports as have been called for under the law.

The marvelous and steady increase of railroad traffic over the land-grant and bond-aided roads, as shown in the reports of this Bureau, is a striking evidence of the prosperity of the people, and especially of the growth of the West.

The physical conditions of the roads in question have improved in fully equal ratio with their great financial increase. Substantial improvements have been made in the main lines; heavy steel rails have taken the place of lighter quality; iron and steel bridges have replaced wooden ones, and the ballasting has been materially improved.

Attention is invited to the following statement, showing increase of net earnings of the different railroad companies for the last four years:

Road.	1898.	1899.	1900.	1901.
Union Pacific	$1,395,017.08	$2,076,775.16	$1,325,211.27	$525,532.13
Central Pacific	1,566,134.97	[1] 162,268.05	1,023,726.90	215,395.70
Central Branch	57,123.44	[1] 105,358.20	184,521.49	[1] 51,407.30
Sioux City and Pacific	72,748.85	22,720.94	[1] 21,459.96	47,273.39
Atchison, Topeka and Santa Fe	2,263,847.77	1,372,637.49	3,282,360.29	2,319,134.49
Chicago and North-Western	989,262.14	1,310,991.07	2,267,388.03	137,010.61
Chicago, Burlington and Quincy	1,785,073.19	513,142.79	940,138.18	2,905,669.66
Chicago, Milwaukee and St. Paul	1,078,868.16	1,359,698.60	[1] 883,940.68	927,654.34
Chicago, Rock Island and Pacific	1,418,792.18	39,186.59	676,349.80	531,448.35
Chicago, St. Paul, Minneapolis and Omaha	33,930.60	811,403.96	[1] 178,931.35	207,818.57
Choctaw, Oklahoma and Gulf	58,891.84	10,630.34	785,187.28	885,075.54
Dubuque and Sioux City	216,556.20	153,579.90	[1] 254,440.64	[1] 36,336.20
Missouri, Kansas and Texas	641,214.53	49,665.37	[1] 35,292.50	426,688.02
Missouri Pacific	587,854.94	[1] 281,993.09	578,793.85	846,167.49
Northern Pacific	6,382,751.71	1,047,540.78	1,827,011.14	224,388.69
Oregon and California	477,907.99	[1] 19,618.42	[1] 97,703.72	104,655.44
St. Joseph and Grand Island		[1] 60,224.36	[1] 23,123.06	180,526.31
St. Louis and San Francisco	320,044.17	12,893.19	386,165.81	939,832.21
St. Louis, Iron Mountain and Southern	914,387.46	[1] 248,813.03	1,297,379.62	1,193,912.46
Santa Fe Pacific		291,884.30	1,822,449.70	[1] 14,908.92
Southern Pacific of California	2,582,204.26	[1] 1,094,219.12	1,415,603.74	588,850.91
Texas and Pacific	426,440.75	232,278.87	[1] 60,747.71	1,597,745.47
Wisconsin Central	139,492.06	174,277.68	[1] 4,048.89	[1] 198,669.26

[1] Decrease.

It will be observed that the increase in net earnings for the fiscal year amounts to over $13,000,000. Attention is also invited to the following statement, showing the increase of earnings and expenses for 1901 over 1900:

Road.	Increase of—	
	Earnings.	Expenses.
Union Pacific	$2,425,692.87	$1,900,160.74
Central Pacific	794,483.86	579,088.16
Central Branch	[1]4,588.46	46,818.84
Sioux City and Pacific	38,431.02	[1]5,842.37
Atchison, Topeka and Santa Fe	4,374,743.43	2,055,608.94
Chicago and North-Western	421,873.39	284,862.78
Chicago, Burlington and Quincy	11,692,998.21	8,787,328.55
Chicago, Milwaukee and St. Paul	484,320.65	[1]443,333.69
Chicago, Rock Island and Pacific	2,714,090.21	2,182,641.86
Chicago, St. Paul, Minneapolis and Omaha	264,700.56	56,881.99
Choctaw, Oklahoma and Gulf	[1]839,991.42	954,915.88
Dubuque and Sioux City	[1]17,783.72	18,552.48
Missouri, Kansas and Texas	2,776,571.22	2,349,883.20
Missouri Pacific	886,105.92	39,938.43
Northern Pacific	2,539,665.86	2,315,277.17
Oregon and California	316,497.22	211,841.78
St. Joseph and Grand Island	[1]4,740.03	[1]185,266.34
St. Louis and San Francisco	2,190,451.19	1,250,618.98
St. Louis, Iron Mountain and Southern	1,394,388.12	200,475.66
Santa Fe Pacific	699,962.41	714,871.33
Southern Pacific of California	1,376,526.99	787,676.08
Texas and Pacific	2,640,489.41	1,042,743.49
Wisconsin Central	[1]313,141.60	[1]114,472.34

[1] Decrease.

The increase in gross earnings is over $37,000,000 and the increase in expenses is over $24,000,000. The large increase in expenses is evidently due to the additions and betterments in rolling stock, roadbed, etc., mentioned in above paragraph.

BOND-AIDED ROADS.

UNION PACIFIC RAILROAD COMPANY.

The Government terminated its pecuniary interests in this company on November 1, 1897, when the main line of its road was sold to the purchasing trustees of the reorganization committee under a decree of the United States court for the district of Nebraska.

The Union Pacific Rail*road* Company was incorporated June 23, 1897, and has become the successor to the lines of the Union Pacific Rail*way* Company. The entire main line was opened to public business April 15, 1898.

By the acts of 1862 and 1864 lands were granted by the United States to the companies forming the present corporation as follows:

	Acres.
Union Pacific	12,000,000
Kansas Pacific	6,000,000
Denver Pacific Railway and Telegraph	1,400,000
Total	19,400,000

The following points are the land-grant termini: Union Pacific, Bridge Junction, Omaha, Nebr., and Union Depot, Ogden, Utah; Kansas Pacific, Kansas City, Mo., and a point on the railroad between Monument and Gopher stations and Eighteenth street, Denver, Colo.; Denver Pacific, Denver, Colo., and Cheyenne, Wyo.

The records of the General Land Office show that during the fiscal year ended June 30, 1901, there were patented to this company 986,073.13 acres. On that date the number of acres patented, as shown by the books of the General Land Office, is as follows:

	Acres.	Acres.
Union Pacific:		
In Colorado	550,080.45	
In Nebraska	4,842,906.57	
In Wyoming	1,874,251.20	
In Utah	364,416.80	
		7,631,655.06
Kansas Pacific:		
In Kansas	3,526,912.48	
In Colorado	216,100.89	
		3,743,013.37
Denver Pacific, in Colorado		457,392.33
Total		11,832,060.76

The report of the company shows that to June 30, 1901, they had acquired in the reorganization, by purchase, unsold lands, including lands not yet patented, amounting to 4,094,248.93 acres, and by cancellation of contracts 1,478,308.91 acres. The total cash receipts from all sales to date amounted to $976,505.35, and there were outstanding on account of time sales $1,890,247.21. The average price per acre now asked for land is 70 cents.

At the close of the fiscal year the total number of miles operated was 2,958.14. The track is laid with steel rails of various weights, from 52 to 90 pounds per yard. There are, however, 72.26 miles laid with iron rails from 56 to 58 pounds per yard. The cross ties are of oak, fir, pine, and cedar, and average 2,868 to the mile. The track is fenced for 1,825 miles. The ballast consists of 21.90 miles of stone, 737.77 miles of gravel, 111.40 miles of cinder, 132.67 miles of burnt clay, 19.50 miles of crushed slag, and 1,941.94 miles of natural soil. The bridges aggregate 154,370 feet in length.

The assessed valuation for taxation of roadway, bridges, track, buildings, rolling stock, etc., for taxation averages $8,224 per mile, or a total of $24,327,272.

The express business is transacted by the Pacific Express Company, the railway company receiving 50 per cent of the gross earnings. The 5 miles of track from Ogden, Utah, to the western terminus of the road are leased to the Central Pacific Railroad Company under a contract dated February 10, 1888, for a consideration of $20,000 per annum.

On May 1, 1901, this company issued $93,957,000 of 4 per cent convertible bonds to acquire the stock of the Southern Pacific Company and other securities. This acquisition gives to the Union Pacific control of all the lines formerly governed by the Southern Pacific Company, and in consequence a through line to the Pacific coast via the Central Pacific Railroad.

The following statements show the operations of the company for the fiscal year and their general balance sheet on June 30, 1901:

Comparative statement of earnings and expenses.

	Year ended—		Difference.	
	June 30, 1901.	June 30, 1900.	Increase.	Decrease.
EARNINGS.				
Passenger	$4,410,333.65	$4,034,945.66	$375,387.99	
Freight	18,462,554.34	16,504,304.87	1,958,249.47	
Mail	1,353,765.50	1,357,509.71		$3,744.21
Express	389,290.97	322,932.56	66,358.41	
Miscellaneous	856,655.74	827,214.53	29,441.21	
Total	25,472,600.20	23,046,907.33	2,425,692.87	
EXPENSES.				
Maintenance of way and structures	3,192,003.37	2,156,859.50	1,035,143.87	
Maintenance of equipment	3,203,329.18	2,913,806.48	289,522.70	
Conducting transportation	7,362,491.02	6,911,886.30	450,604.72	
General expenses and taxes	1,464,559.99	1,339,670.54	124,889.45	
Total	15,222,383.56	13,322,222.82	1,900,160.74	
Net earnings	10,250,216.64	9,724,684.51	525,532.13	
Miles operated	2,958.14	2,892.95	65.19	
Earnings per mile	$8,611.02	$7,966.58	$644.44	
Expenses per mile	5,145.93	4,605.06	540.87	
Net earnings per mile	3,465.09	3,361.52	103.57	
Percentage of expenses to earnings	59.75	59.06	.69	

Revenue and expenditures for year.

REVENUE.		
Earnings	$25,472,600.20	
Profits on stocks of other companies	629.50	
Profits on bonds of other companies	1,549.37	
Dividends on stocks of other companies	719,433.75	
Interest on bonds of other companies	1,198,225.80	
Interest on miscellaneous investments	153,874.95	
Interest on bank balances, etc	528,105.35	
Total		$28,074,418.92
EXPENDITURES.		
Operating expenses	14,432,423.66	
Interest on first-mortgage bonds	3,921,370.00	
Interest on other funded debt	626,380.00	
Betterments and improvements	750,000.00	
Taxes	789,959.90	
Dividends	7,979,514.00	
Total		28,499,647.56
Deficit		425,228.64

General balance sheet.

ASSETS.		
Cost of road and fixtures	$224,289,446.18	
Cost of equipment	11,180,039.74	
Land contracts, land cash, etc	1,955,302.55	
Fuel, material, and stores on hand	1,975,973.07	
Cash on hand	1,929,656.68	
Company's stocks and bonds	477,390.00	
Other stocks and bonds	111,398,711.20	
Miscellaneous investments	61,631,943.52	
Bills and accounts receivable	2,824,128.51	
Due from other companies on account of traffic	469,533.35	
Due from United States	610,544.13	
Total		$418,742,668.93

LIABILITIES.

First-mortgage bonds	100,000,000.00	
Interest on same due and accrued	2,010,100.00	
Other funded debt	93,957,000.00	
Interest on same accrued not due	626,380.00	
Dividends unpaid	18,905.00	
Pay rolls, vouchers, and accounts payable	9,344,353.30	
Taxes accrued not due	431,537.47	
Insurance fund	127,716.74	
Land accounts	2,140,370.43	
Improvement equipment fund	70,056.53	
Set aside for dividends payable October 1, 1901	4,071,006.00	
Capital stock	201,538,900.00	
Total		414,336,325.47
Surplus		4,406,343.46

* * * * * * *

The estimates of appropriation submitted and recommended by me for the Bureau for the year ending June 30, 1903, are as follows: Commissioner, $4,500; bookkeeper, $2,000; clerk, $1,400; clerk, $1,000; assistant messenger, $720; total, $9,620.

The personnel of the Bureau at present is as follows:

James Longstreet, Commissioner	$4,500
Herman Schreiner, bookkeeper	1,600
Miss K. M. Schmidt, clerk	1,400
Miss Ellen W. Fitz Simons, clerk	1,000
Abraham Hayson, assistant messenger	720

It affords me pleasure to commend the general efficiency of the employees of the Bureau.

I have the honor to be, very respectfully, your obedient servant,

JAMES LONGSTREET,
Commissioner.

Hon E. A. HITCHCOCK,
Secretary of the Interior.

REPORT OF THE DIRECTOR OF THE TWELFTH CENSUS.

DEPARTMENT OF THE INTERIOR,
CENSUS OFFICE,
Washington, D. C., November 1, 1901.

SIR: I have the honor to report as follows concerning the operations of this office from November 1, 1900, to the above date:

The work of tabulating the returns and results of the field work of the enumerators and special agents of the Twelfth Census has progressed with reasonable celerity. Much difficulty has been experienced, however, and more or less delay caused by the reduction of the clerical force, owing to the absence of employees from either illness or annual leave.

The law provides that the four principal reports shall be placed in the hands of the public by the 1st of July, 1902, and this requirement has rendered it absolutely necessary to maintain a clerical force adequate to complete the work within the prescribed period. The statisticians made estimates of the time needed to finish the particular branch assigned to each of them. The plans so submitted have been

greatly interfered with owing to the absence of clerks from duty, as explained above. It was hoped by the 1st of November a large number of employees could be dispensed with; but inasmuch as the work has been retarded, owing to the difficulty of maintaining the clerical force at its maximum, it is not likely that there will be any material reduction until after the first of the year. The officials of the office believe that their allotted task will be completed in ample time.

It was hardly to be expected out of the large number of agents employed in the field work—about 55,000 in all—that there would not be some who would prove incompetent and unfaithful to duty. The Director has endeavored to enforce the census act to the letter, and through the assistance of the Attorney-General has proceeded against all offenders. Please find below a statement of the various prosecutions that have been conducted by this office.

MARYLAND.

St. Mary County.—Stephen A. Abell, Charles H. Guyther, Philip T. Graves, Daniel J. Bowles, enumerators, and Joseph H. Ching, attorney at law. The preliminary examination in the Geographer's Division showed that in this county these enumerators had made false and fraudulent returns by placing on the schedules fictitious names—names of persons who had died prior to taking the census and the names of nonresidents.

All these men were arrested on warrants sworn out in Baltimore, and were brought before the Federal grand jury at that city, and nine indictments against them were returned on May 6, there being four indictments against each enumerator individually, and four against each enumerator and Ching jointly. The trial began May 27, but on May 25 Guyther appeared before the jury and pleaded guilty. Sentence was suspended, and he was called as a witness for the Government. Ching was convicted, on June 8, of conspiracy with Guyther, and was sentenced to two years' imprisonment and to pay a fine of $1,000. An appeal was taken and the case is now before the United States court of appeals. Guyther was sentenced to one day in jail and to pay a fine of $100. Abell, Bowles, and Graves were acquitted of the conspiracy charge, and the charge against Graves for making false and fictitious returns was withdrawn. Bowles pleaded guilty to making false returns, and was sentenced to sixty days in jail and to pay a fine of $200. Abell was tried on June 24 on a charge of making false and fictitious returns. The jury failed to agree, and he will probably be tried again some time in November.

Charles County.—The examination of the schedules, made at the same time as in St. Mary County, showed the same condition of affairs, and the results of the investigation were laid before the grand jury in Baltimore, who rendered true bills against Henry Mattingly, an enumerator, who came to court on June 15, pleaded guilty, and was sentenced to one day in jail and to pay a fine of $200.

Anne Arundel County.—An investigation was also made in this county, and evidence was presented to the grand jury who found true bills against William Frisbee Anderson and Fred H. Borneman for making false and fictitious returns. Anderson was convicted June 24, and sentenced to pay a fine of $200. Borneman's case was continued until the fall term of the district court, and the trial will probably take place in November.

Baltimore County.—An examination of the schedules returned by Eli F. Wilhelm, in reporting the deaf, dumb, and blind, developed the fact that his returns, when tested by correspondence with individuals reported, were, in many instances, incorrect. The case was submitted to the United States attorney for the district of Maryland, who reported that, it being uncertain whether they could prove the charges against him, they advised that proceedings be not started.

PENNSYLVANIA.

D. Smith Talbot, supervisor of Second district.—Proceedings were started against Mr. Talbot for his failure to pay the interpreters who had assisted the enumerators in taking the census in his district, Mr. Talbot having rendered his account for their services and received the money from this office. After proceedings against him had been begun by the United States attorney at Philadelphia, the defendant made payment in full to all interpreters, except in those instances where the interpreters had departed from the district. The United States attorney was authorized by the Department of Justice on May 24 last to continue this case until the next term of court.

NEW MEXICO.

City of Santa Fe, Pedro Sánchez, supervisor.—An investigation into the accounts of this supervisor showed that he had failed to pay interpreters employed by him during the enumeration, although the money had been remitted to him for that purpose from this office, and that he had also made false and fictitious returns of the amount of services rendered by some of the interpreters. Upon application to the Department of Justice, the United States attorney for the district of New Mexico was instructed to begin proceedings at once against Sánchez and his clerk, Sena. They were arrested, and information was presented to the grand jury, who found indictments against both Sánchez and his chief clerk, Sena, under the charge of having filed false and fraudulent vouchers. Two other indictments were secured against them, charging each of them with embezzlement and forgery. The United States attorney writes that it was not practicable to try these cases at the last term of court on account of want of time, but that they will come up for trial at the next term.

TENNESSEE.

Selmer, McNairy County.—Henry C. Gooch, an enumerator, was found, upon examination of the schedules, to have made false returns of the population. An examination by special agent was made and the fact established that he had placed on his schedules fictitious names—names of persons who had died prior to taking the census and the names of nonresidents. A warrant was sworn out for this man and he was arrested. He will probably be tried at the November term of court.

MISSISSIPPI.

Third supervisor's district.—Samuel W. Glidden, enumerator in E. D. 71; Paul W. Davidson, E. D. 74; William Knight, E. D. 76; Scott E. J. Watson, E. D. 85; Abraham L. Stringer, E. D. 87; William H.

Toler, E. D. 92: An investigation of the agricultural schedules returned by these men, in comparison with the population schedules, showed that they had made false and fictitious returns of the number of farms in their districts. Proceedings were brought against them, they were arrested, and their cases were presented to the grand jury, which met at Vicksburg, and on July 3 rendered indictments for all six on charges as alleged. Their trials will come up at the next term of the court, which will be early in January.

ARIZONA.

Charles W. Pugh, special agent for the Agricultural Division of the Census Office, Phoenix.—An examination of this man's expense vouchers, rendered from time to time during the summer of 1900, led to the suspicion that he was having subvouchers signed in blank and filling them in afterwards for much larger amounts than he had actually expended, and that he had also put in fraudulent vouchers for bills he had never contracted. An investigation was begun by mail with parties whose names and addresses were signed on the subvouchers, which corroborated the impression that the office had as to his honesty. The case was presented through the Department of Justice to the United States attorney, who arrested Mr. Pugh, and he was indicted by the grand jury and brought to trial at the July term of the court. The case was continued on a demurrer, which the court now has under advisement, and can not be reopened until the November term of court. Indictments against Pugh, of the same character, were also secured at Florence, Ariz. This case will probably come up after the case above referred to is decided. We have also evidence of fraud on Pugh's part, committed on a trip to California, but it was thought best not to take up the California case until after the Arizona cases were settled.

I submit herewith statements from the chief statisticians showing the condition of the work of their respective divisions at the present time:

POPULATION DIVISION.

W. C. Hunt, *Chief Statistician.*

I have the honor to transmit the following statement concerning the condition of the work of the Population Division to October 31, 1901, inclusive:

In the work of machine tabulation there have been counted to October 31, inclusive, 314,280,314 cards, representing very nearly 84 per cent of the entire number of cards to be handled. If this figure, representing the actual number of cards handled to date, is compared with the original estimate as to the number of cards necessary to be handled daily in order to complete the machine work by March 1, 1902, it appears that we are to date (October 31) more than 19,000,000 cards ahead of my estimate. It is apparent, therefore, from this statement, that the work of machine tabulation is likely to be completed easily within the time originally estimated, and that this work could be completed early in January, 1902, if the number of machines now in operation (about 140) could be utilized. Toward the close of the machine work, however, it will not be possible to use to advantage a large number of tabulating machines, and this will extend somewhat the period of machine tabulation, but certainly not, with even a small number of machines, beyond the estimated date of completion, namely, March 1, 1902.

The first four runs of the cards, for which are obtained the data contained in the tabular presentations to be included in part 1 of the Report on Population, and equivalent to the handling of 210,292,859 cards, are completed. The fifth, sixth, seventh, eighth, and ninth runs, from which are obtained the data contained in the tabular presentations to be included in part 2 of the Report on Population, represent the handling of 165,103,387 cards, of which 103,987,455 have been counted to date, includ-

ing all of the fifth run, from which are derived the data relating to ages (in detail), conjugal condition, school attendance, illiteracy, and inability to speak English. There remain, therefore, 61,115,932 cards to be counted, subdivided by runs as follows:

	Total cards.	To be counted Oct. 31, 1901.
Fifth run	76,303,387	
Sixth run	[1]30,100,000	8,794,287
Seventh run	27,700,000	22,351,165
Eighth run	15,500,000	14,507,396
Ninth run	15,500,000	15,463,084
Total	165,103,387	61,115,932

[1] Including the second handling of approximately 2,400,000 cards.

This statement shows that for the sixth and seventh runs, from which are derived the data relating to occupations, there has been counted to October 31, 46 per cent, and for the eighth and ninth runs, from which are derived the data relating to dwellings and families and the ownership of homes, 3 per cent; this part of the machine tabulation having only recently been commenced.

Of the estimated number of cards (27,700,000) representing persons with gainful occupations to be handled on the sixth and seventh runs there were originally punched, approximately, 21,300,000 cards, leaving 6,400,000 cards to be rejected by the machines and subsequently classified, this number of cards representing occupations that were not classified when the cards were originally punched. Of the 6,400,000 cards, there have been classified to date 3,852,024, or 60 per cent. The average number of cards classified daily during the month of October was 36,764, and on this basis there is no reason why this classification work should not be completed during the month of January, 1902.

Of the estimated number of family cards (15,500,000) to be handled on the eighth and ninth runs there have been punched to date 6,458,914, or 42 per cent. During the month of October the average number of cards punched daily was 114,917. Since the 1st of September the force engaged in punching the family cards has been increased from less than 100 to a maximum force of 233, the latter number representing the whole number of seats at present available for the work of keyboard punching. This number of machines is kept in operation daily, and with the present daily output it is safe to assume that the work of punching the family cards will be completed by the close of January, 1902.

The present condition of the tabular matter (general tables) for part 1 of the report on population is briefly summarized as follows:

Part 1.

Subjects.	Printed.	Plated.	In type.	In copy.	To be supplied.	Total pages.
Aggregate population	480					480
Sex, general nativity, and color	81	49	74			204
State or Territory of birth				46		46
Country of birth				74		74
Foreign parentage				21	81	102
Citizenship and years in the United States			44	50	6	100
Total	561	49	118	191	87	1,006

From this summary it appears that practically 91 per cent of the tabular matter comprising part 1 is in process of printing, 561 pages, or 56 per cent, being already printed, 49 pages, or 5 per cent, plated, and 309 pages, or 30 per cent, either in type or in copy. The 87 pages not yet supplied to the printer comprehend the data relating to foreign parentage, derived from the fourth run of the cards, which has only recently been completed, but the copy resulting therefrom will be made in time to follow the completion of the matter already in process of printing.

The textual matter to accompany the general tables, representing approximately 200 pages of print, is also in process of preparation, and will be supplied to the printer at an early day. Much of the analytical text has already been prepared and used in the several bulletins which have been issued to date, and only needs to be amplified in certain cases for use in the final report.

Of the 1,014 pages of tabular matter to be included in part 2 of the report on population, 100 pages, relating to "school, militia, and voting ages," and derived from the first run of the cards, are already in type or in copy. Of the remaining 914 pages, 414 pages comprehend tables relating to ages, conjugal condition, school attendance, illiteracy, and inability to speak English, 354 those relating to occupations, and 146 those relating to dwellings and families and the ownership of homes. The tables representing the 414 pages first mentioned are derived from the fifth run of the cards, which, as I have already stated, is entirely completed.

The work of compiling the results derived from the fifth run will be taken in hand immediately following the completion of the work compiling the results relating to foreign parentage, etc., derived from the fourth run, and this work will be followed in turn by that relating to occupations and the family data, in order that upon the completion of the copy needed for part 1 the printer may be supplied with copy for part 2 in the order, as nearly as possible, of the several subjects, as follows:

Part 2.

Subjects.	Number of pages.	Subjects.	Number of pages.
Ages	150	Dwellings and families	56
School, militia, and voting ages	[1]100	Ownership of homes	90
Conjugal condition	96		
School attendance	62	Total	1,014
Illiteracy	78	Textual matter (estimated)	186
Can not speak English	28		
Occupations	354	Aggregate	1,200

[1] In type or copy, as previously stated.

The present condition of my work, as herein outlined, shows that there is every prospect for completing the work relating to part 1 at a comparatively early date, in order that that portion of the report may be issued during the month of December, if possible, and that copy for part 2 can be supplied to the printer from time to time thereafter, so that the last batch of copy may be transmitted not later than April 15, 1902, according to my estimate made under date of February 2, 1900. It is not possible to state positively that this will be the case, but I see no reason now why I should not conform substantially to the statements made in my original estimate.

DIVISION OF MANUFACTURES.

S. N. D. North, *Chief Statistician.*

The work of the division of manufactures is rapidly drawing to completion under circumstances which apparently render it possible to comply with the provision of the census act which requires the main results of the manufacturing census to be completed and published prior to July 1, 1902.

In order to insure this result it has been necessary to increase the force of the division temporarily to 412 clerks; and the work has been greatly expedited by the substitution of mechanical appliances. The entire tabulation of general schedule No. 3 has been done upon tabulating typewriter machines, this being the first use of this machine in census work. By making a carbon copy of the tabulation sheets the amount of clerical labor in handling the returns has been enormously reduced, and the completion of the work within the time limit set by Congress would not have been possible without the aid of these machines except by a large increase in the clerical force. Some forty adding machines of the latest improved pattern have also been utilized in the division in obtaining results from the tabulation sheets. Actual experience has demonstrated that one clerk with an adding machine can turn out at least four times the amount of work in addition that can be achieved by a clerk adding mentally. There has been in addition a much higher average of general accuracy than is attainable by the mental process.

The several stages of the work of the division of manufactures already completed are those of classification, which was finished on February 9; revision, which was finished on September 26; tabulation of general schedule No. 3, which was finished on October 7; tabulation of special schedules by hand, which was finished on October 14. The force of the division is now very largely concentrated upon the work of addition and summarization, and this work is now progressing with a steady swing, as the clerks become more expert through experience, which indicates that it will be finally completed about the 1st of March, 1902. From the summarization the work passes

to the section of final results, which is now so organized that it can prepare the figures for the printer practically as fast they are received. Barring unforeseen contingencies, therefore, it seems probable that the entire material for Part II of the manufacturing statistics—a volume of approximately 1,200 pages—will be ready for the printer on about March 15. This volume will contain the manufacturing statistics by States, and will also include, in connection with each State, the statistics of the several cities in that State. At the present writing the work has been completed and published in bulletin form for the States of Arkansas, Arizona, Colorado, Connecticut, Delaware, Florida, Idaho, Indian Territory, Iowa, Kansas, Louisiana, Montana, Nevada, New Hampshire, New Mexico, North Dakota, Oklahama Territory, Oregon, Rhode Island, South Dakota, Utah, Vermont, and Wyoming. The States completed and shortly to be sent to the printer are Alabama, California, Georgia, Illinois, Kentucky, Maryland, Michigan, and the Hawiian Islands. These States represent 30.5 per cent of the total product of manufacturing and mechanical industries as reported at the Eleventh Census.

Simultaneously with the work upon the statistics of the States, the preparation of the statistics of the United States totals by States and by industries, which will constitute the major portion of Part I of the manufacturing volumes, has been progressing, and it will be possible to place the entire copy for Part I—also comprising about 1,200 pages—in the hands of the printer within a month or six weeks from the date when copy is completed for Part II.

Simultaneously, also, work has been progressing upon the reports for selected industries, which will comprise Part III of the manufacturing volumes. Census bulletins have already been printed or are in type for the following industries: Coke manufacturing, petroleum refining, salt, paper and pulp mills, copper, lead, and zinc smelting and refining; gas, railroad repair shops, and the tar and turpentine industry. The final results in the following selected industries are now in the hands of expert special agents, who are engaged in the preparation of the text for their reports, which it will be possible to publish during the winter months: Brick and pottery products, dyeing and finishing of textiles, silk manufacture, flax, hemp, and jute manufacture; leather, tanned and curried; boots and shoes; glass; iron and steel—tin plate works, blast furnaces, and rolling mills; shipbuilding—steel and iron vessels and wooden vessels.

REPORT ON COTTON GINNING.

During the current year the division of manufactures has prepared and published two bulletins showing the cotton crops grown in the years 1899 and 1900, as returned to the Census Office by the cotton ginners.

The statistics of the crop of 1899 were gathered largely by the enumerators under instructions to secure a return from every cotton ginnery operated for the crop mentioned. By the canvass of the enumerators a complete mailing list of the ginneries of the country was compiled, but it was problematical whether the office could obtain similar reports through the mails. The results of the canvass by mail, as shown by the second cotton bulletin, demonstrated this method to be entirely feasible. Every ginning establishment in the United States was heard from, either directly or indirectly. Wherever there was failure on the part of the ginners to respond to the inquiries of the Census Office, the cooperation of the local postmasters was secured through the courtesy of Postmaster-General Smith, and thus the product of every ginnery obtained, or the fact ascertained that it had not been in operation for the crop of 1900.

The second report, like the first, is therefore believed to present complete statistics of the cotton crop and give the same with a detail and accuracy not possible under other methods, having to depend upon reports of transportation lines and port receipts.

This office has secured from cotton producers, cotton exchanges, cotton factors, and cotton manufacturers an overwhelming approval of the services rendered by these reports. I am, therefore, led to recommend that Congress pass a joint resolution authorizing and instructing the Census Office to make a similar canvass of the cotton ginneries annually. Under its present organized system of machinery this office will be able to publish this cotton report as early as the month of May or June in each year, or three to four months in advance of their possible publication through other agencies. The commercial advantages resulting from these earlier, more accurate, and detail statistics as to the volume of the annual cotton crop are too obvious to be further dwelt upon.

DIVISION OF AGRICULTURE.

L. G. Powers, *Chief Statistician.*

I herewith submit a detailed report of the state of the work in the agricultural division of the Twelfth Census, and the prospect of completing the same within the time called for by the act of Congress. The work of the division naturally divides itself into a number of distinct branches concerning each of which I will make specific mention.

After the preliminary work incidental to the sending out of the schedules and receiving the same and settling the accounts of the enumerators, the first important work of the division has been the revision of schedules. This includes the examination of the same for the detection and correction of errors and omissions by the enumerators. It involves the sending out of over a million letters to the farmers and enumerators and the entry upon the schedules of the information received in return. This work has been divided into four different branches, known in the office as the first, second, third, and fourth revisions. There are about 5,725,000 farm schedules, and all have to pass through each of these four revisions. The amount of labor expended on such revisions up to and including October 15, 1901, was 820,895 hours, or the equivalent of the work of one clerk for 117,271 days. At that time the first and second revisions had been finished, and of the 5,725,000 schedules all but 50,000 had passed through the third revision, and all but 210,000 through the fourth or final revision.

The labor required to complete the third revision was equal to that of one clerk for 300 days; that needed for the fourth revision, the work of one clerk for 1,425 days. Of the work required to revise the schedules 98.5 per cent had, therefore, been performed October 15. With the present force the third revision will be completed about November 1, and the fourth revision shortly thereafter.

By the method adopted in the division, after the schedules have been revised the facts contained thereon are transferred to cards by punching machines preparatory to their addition on the Hollerith tabulating machines.

There are to be punched 5,725,000 farm cards, or one for each schedule, and not far from 120,000,000 crop and animal cards, or a little more than 20 for each schedule. Of these there were punched, October 15, a total of 5,047,510 farm cards and 100,007,871 crop and animal cards. There remained to be punched 677,500 farm cards and 20,000,000 crop cards, or about 12 per cent of the former and 17 per cent of the latter. There had been expended in punching and gang punching, and in the necessary supervision, a total of 602,917 hours of work, or the equivalent of the services of 86,131 clerks for one day. The work remaining to be done represents the labor of 17,000 clerks for one day, and with the present force will be completed in about 35 working days, or not far from the 1st of December.

After the cards have been punched and gang punched they are sorted and arranged in order for the tabulating machines through which they are run and the figures upon them automatically added. By the method at present in use the 5,725,000 farm cards are run through the machines three times, making the equivalent of tabulating 17,175,000 cards once. Of this work there had been completed October 15 the following amount:

Tabulated for the first time	4,918,330
Tabulated for the second time	1,458,161
Tabulated for the third time	872,050
Total	7,248,541

There remained the equivalent of 10,900,000 cards to be tabulated once.

Of the 120,000,000 crop and animal cards those reporting live stock are passed through the tabulating machines three times; those reporting cereals, cotton, and other leading crops twice, and the others only once. The exact number of cards in each of these subdivisions can not as yet be estimated exactly. The work of tabulating the crop and animal cards will, however, probably be the equivalent of tabulating 220,000,000 cards once. Of that work the following portion has been performed October 15:

Cards tabulated once	85,617,194
Cards tabulated twice	5,956,717
Cards tabulated three times	1,174,409
Total	92,748,320

The unfinished work of the tabulation, therefore, probably equals that of tabulating 128,000,000 cards once.

From the foregoing it can be seen that October 15 there had been completed 42 per cent of the work of tabulating the farm cards and that of tabulating the crop and animal cards.

The work expended prior to October 15 in operating the tabulating machines, sorting the cards, and other work incidental to tabulation by the Hollerith system has been 267,849 hours, or the equivalent of the labor of 36,835 clerks for one day. At the present rate of work the tabulation of the farm cards will be completed shortly before February 1, 1902. With the machines in use and that will be in operation by October 20, the average rate of tabulating the crop and animal cards will be 1,100,000 per day. This will permit the completion of the tabulation in 117 working days from October 15. By working a small force at night after the completion of the work of card punching it is expected to shorten the time of tabulation to 100 days and close the same not far from February 10.

The results of the additions made by the tabulating machines are transferred to result slips that are sent to the sections of final results, and there critically examined. The same sections take measures for detecting all errors, and place the figures in tables for the final report. The amount of labor performed upon this branch of work October 15 was 154,234 hours, or the equivalent of the work of 22,033 clerks for one day. This is about 40 per cent of the total amount of labor in the sections of final results. As the work is arranged the last table will be finished and ready for the printer about ten days after the completion of the work on the tabulating machines.

The tables of the two volumes of the final report will cover about 1,057 pages, of which 712 are tables by counties and 345 tables by States and Territories. A portion of each of the latter class of tables is completed when the corresponding county table is finished. The work upon the two classes of tables goes forward with equal speed, and the State tables are completed at substantially the same time as the county tables. The county tables are prepared in their first form shortly after the tabulation of the data for the same on the first run of cards. They are, however, held for revision until the completion of the final run for the State of which they form a part. The completion of the county tables, therefore, measures the rapidity with which the tabular work of the report progresses.

There had been completed and made ready for the printer, October 15, 100 of the 712 pages of county tables. A much larger number of pages were finished but awaited verification from the second and third runs of cards. It is expected that prior to the close of the week ending October 26 there will be 126 pages of the county tables ready for the printer. During the month ending November 30 there will be completed 100 pages; during the month ending December 28, 99 pages; during the month ending January 25, 155 pages; and during the five weeks ending March 1, 202 pages. On this latter date all county and State tables will be finished. If the tabulation is completed by February 10, as stated above, the date for preparing the county and State tables for publication will be about February 15, instead of March 1, as stated above.

In addition to the work embodied in the tabular matter referred to above, the division is carrying on an investigation relating to irrigation. This will be embodied in a report of some 250 pages. It will be prepared and copy sent to the printer from time to time between January 1 and March 1, at which date the last copy relating to the subject will be finished.

In the foregoing exhibit I have given no statement of the amount of labor expended in the general work of the division, nor of the amount of labor expended in a number of minor and incidental investigations. These in the past have made up quite a large aggregate, but, with the exception of the general work of supervision and direction, will be small in the future. I omit detailed mention of them for the reason that a statement thereof is not necessary for the proper presentation of the present state of the work and the plans for completing the same in the time called for by the act of Congress.

After the completion of the tables, which it is expected will take place not far from the 1st of March or a little before, the only work of the division remaining will be writing the introduction to the two volumes. Work upon that introduction is being performed at the present time, and it is expected that all the materials will be collected by the 1st of March and in a form that will require less than a month to put them in shape for the printer. This will close the work of the division with reference to the census of agriculture. As the printer can readily print and bind the volumes after April 1 prior to July 1 it can be seen that there is every reason to expect so to close the work of the division as to comply with the act of Congress establishing the Census Office.

DIVISION OF VITAL STATISTICS.

W. A. KING, *Chief Statistician.*

I have the honor to submit the following report of the work of the Division of Vital Statistics since my last annual report (October 16, 1900):

At the date of the last report we had not quite completed the collection of the data. The number of deaths reported by the enumerators was 686,615. In addition to these, transcripts of registration records aggregating 628,813 deaths were secured. In order to determine the accuracy of registration and to make the returns as complete as possible, both enumeration and registration returns were secured for the greater part of the registration area, and the two were thoroughly and systematically compared.

The comparisons made resulted in the addition of some 60,936 deaths to the registration records, and the further completion of the same by supplying 63,249 items of omitted information.

The total number of deaths secured from both sources was 1,039,094. This is exclusive of stillbirths. The corresponding figures in 1890 were 841,419, the increase being 197,675, or 23.5 per cent. It is gratifying to state that the returns are much more complete than at the last census. The registration data are also much more uniform, and therefore more valuable, on account of the preliminary work of this office in securing modifications and improvements in the forms of certificates used, so as to supply the essential details required for the census compilations.

The registration area was extended by the inclusion of Maine and Michigan and 96 additional cities of 8,000 or more population in nonregistration States. It now embraces 10 entire States (including the District of Columbia) and 153 cities in other States, and comprehends a population of 28,807,269, or about 38 per cent of the entire population of the United States.

During the year the schedules were all carefully edited to adapt the statement of facts to the mechanical system of tabulation employed, and the data transferred to cards to be counted by the tabulating machines.

Five runs of the cards have been completed, furnishing the data for tables showing deaths by sex and age in relation to color, general nativity, parent nativity; to cause of death; to conjugal condition, and to time (months) in various combinations. The remaining counts involve only part of the cards (such as those having stated occupations, etc.), and provision has been made to execute them expeditiously.

A bulletin of 63 pages was prepared and published on August 20, 1901, giving the preliminary results for States and cities, with an analysis of the registration figures as far as the data available at that time would permit.

Copy for the final report, covering the first eight tables, and estimated to make about 680 pages of printed matter, has been forwarded to the printer.

Additional copy representing about 400 pages of printed matter has been completed, but it is not in the consecutive order of the tables, and is held pending the completion of the intermediate matter.

The work of this division has been performed well within the estimates of time, clerical force, and cost. There is no question that the work, so far as it is not dependent upon population data, at least, will be completed before the time limit fixed by Congress.

At the last annual meeting of the National Conference of Charities and Correction the question of the possibility of the creation of a national bureau of charities and correction was discussed.

From the expressions of the conference as a whole and of its individual members, there is evidently a strong desire on the part of those who can appreciate the importance of such work to have it done under the direction of the National Government. In order that the information gathered should be of permanent value, it must be collected by means of uniform blanks and methods throughout the whole country. This can be done only through the agency of a national bureau, such as the Census Bureau. At present such information is gathered by the different States, but their methods are so varied that the results can not be safely used for purposes of comparison.

The most important things that could be done by the Bureau are as follows: To prepare and publish annually, or at other stated intervals—

1. A list of all the public and private charitable, correctional, and kindred institutions, societies, and associations in the United States.

2. Statistics showing the value of property, receipts and expenditures, and work of such institutions and societies.

3. Statistics showing the movements of the population in the institutions.

4. Judicial statistics showing the number of arrests, convictions, and other dispositions made of the arrested; also the number of times that individual criminals have been convicted.

Statistics of prisons are not sufficient. The lengths of the sentences vary so in different States that a list of the number of prisoners at any given moment in any State is not an accurate measure of the volume of crime in that State. Statistics from coroners are also valuable for the study of suicide.

The present census law may give sufficient power to the Director to do nearly all that is necessary. His power, however, seems to be limited to institutions, and might not be held to cover statistics of associations, the results of whose work are necessary to a complete view of the situation. Neither does the law seem to authorize the payment to institutions, societies, or courts for such information and transcripts of records as may be most economically obtained by this means. If necessary, it would seem that the law should be amended so as to leave no doubt on these subjects.

I hand you herewith an estimate of the appropriations required for census purposes for the fiscal year ending June 30, 1902. Also statement from the disbursing officer showing expenditures during the past fiscal year.

Respectfully, yours,

W. R. MERRIAM, *Director.*

The SECRETARY OF THE INTERIOR.

REPORT

OF

THE POSTMASTER-GENERAL.

POST-OFFICE DEPARTMENT,
Washington, D. C., November 25, 1901.

To the PRESIDENT:

I have the honor to submit the annual report of the Post-Office Department for the fiscal year ending June 30, 1901.

The following statement shows, in brief, the financial operations of the Department for the year:

REVENUES AND EXPENDITURES.

Ordinary postal revenue	$109,531,778.67
Receipts from money-order business	1,668,659.29
Receipts from unpaid money orders more than one year old	430,755.43
Total receipts from all sources	111,631,193.39
Total expenditures for the year	115,554,920.87
Excess of expenditures over receipts	3,923,727.48

While the expenditures in the ordinary development and through various extensions of the service are $7,814,652.88 greater than for the preceding year, the deficit is $1,461,961.22 less. Under present prosperous conditions the annual increase of receipts is fortunately larger than the inevitable increase of outlay, and for several years the deficit has been steadily growing smaller.

The estimate of the revenues and expenditures of this Department for the fiscal year ending June 30, 1903, which has been transmitted to the Secretary of the Treasury, is given below, together with such

other items as may be necessary to show more clearly the bases upon which the calculations are made:

Total postal revenue for 1901	$111,631,193
Add 9 per cent for estimated increase year ending June 30, 1902	10,046,807
Estimated revenue for 1902	121,678,000
Appropriation for postal service for 1902	123,782,688
Estimated deficit for 1902	2,104,688
Estimated revenue for 1902	121,678,000
Add 8½ per cent	10,342,630
Estimated revenue for 1903	132,020,630
Estimated expenditures for 1903	134,731,576
Estimated deficit for 1903	2,710,946

This estimate is based upon the ordinary course of operations, and without considering the possible effect of special measures, the results of which are not yet determinable.

ABUSES OF SECOND-CLASS MATTER.

In my annual report for 1899 I said: "The most urgent need of the postal service is the rectification of the enormous wrongs which have grown up in the perversion and abuse of the privilege accorded by law to second-class matter." Time and experience only emphasize this statement. It is the most urgent need, because it aims at the one great overshadowing evil of the service, and because it underlies and overtops all other reform and advance. It would relieve the Department from the one oppressive burden which cripples and weighs it down, and which stands as a constant and formidable barrier against improvement and progress for the benefit of all the people in many directions. Deeply impressed with this conviction, the Department has taken positive steps, in orders issued on July 17, 1901, to correct the abuses and accomplish substantial reform, so far as it is possible by administrative action.

Before explaining these steps it will be useful to understand more clearly just the extent of the evil and the imperative need of an effective remedy. In dividing mail matter into four classes the law provides that newspapers and periodicals coming within the conditions it prescribes shall constitute the second class with a postage rate of 1 cent per pound. All other printed matter, including books, circulars, and advertising sheets, constitutes the third class, with a postage rate of 1 cent for two ounces. The law defines the characteristics which shall distinguish and determine second-class matter, and it intends to limit the privilege and benefit of the pound rate to legitimate newspapers and periodicals which fulfill these statutory requirements. But, in fact, as will appear more plainly further along, thousands of

publications which are in reality books or purely advertising sheets or gift enterprises, and which the law never meant to include within the second class, have crept in through evasions and loose constructions, until this abuse has grown to colossal proportions and imposes a burden of many millions of dollars a year on the Government and the people.

The second-class matter constitutes nearly 60 per cent of the weight of the entire mail of the country, and yet, while the postal revenue for the last fiscal year was $111,631,193, the second-class matter paid only $4,294,445 of that amount. That is, while making three-fifths of the mail in weight, it furnished only one twenty-eighth part of the revenue. The transportation of the mails is paid for chiefly by weight. The enormous disproportion of return to cost in second-class matter is thus apparent at a glance.

COST OF HANDLING.

It is difficult to determine accurately the exact ratio which the cost of handling and carrying the second-class mail bears to the aggregate cost of handling and carrying all the mail. Though three-fifths in weight, it manifestly could not be fairly charged with the same proportionate share of the cost. A considerable portion of it is handled in bulk. On the other side, the cost in time, space and labor in handling individual pieces of second-class mail is greater than that of the first-class. To reach the best attainable estimate, superintendents of the Railway Mail Service and 30 postmasters of representative cities, large and small, were asked to give their judgment, based upon the practical work of their respective branches, as to what proportion of their total expense is justly chargeable to second-class matter. The Railway Mail Service answered 35 per cent. The answers of the postmasters range from 10 per cent to 40 per cent, though most of them vary but little from 20 per cent. Taken altogether, the average is 20 per cent, and this may be accepted as the substantially correct ratio. But this is the relative cost only in the post-offices. It takes no account of transportation. In that branch weight is the decisive item. Including this service with the other estimate, it is extremely conservative to say that the second-class mail, which makes three-fifths of the weight of the mails, may fairly be charged with one-fourth of the cost. This certainly understates rather than overstates the truth. The cost of the mails for the last fiscal year was $115,554,920. One-fourth of that amount is $28,888,730. The revenue from second-class matter was $4,294,445, leaving an actual net cost and loss to the Government of $24,594,285.

Throwing aside all the expense of handling and confining the examination to the single item of transportation, the result may be more definitely stated and is no less striking. The expense of carrying the

mails, making the whole cost divisible by the whole volume, has in the past been generally reckoned at 8 cents a pound. It is now believed that this figure is excessive. A more accurate weighing and a closer analysis place the cost of carrying the mail as a whole at 6 cents a pound, and, making all allowances, put the cost on second-class matter at about 5 cents a pound. This figure is clearly within the truth. The second-class mail matter which paid the pound rate amounted for the last fiscal year to 429,444,573 pounds. At 5 cents a pound it cost $21,472,228 to carry it. It paid in postage $4,294,445, leaving a net loss to the Government of $17,277,783 on transportation alone.

THE TRUE PUBLIC POLICY.

If the mail thus carried at a heavy loss were limited to what the law intended, there would be nothing more to be said. In that case it would be a deliberate and rational public expenditure for a well-defined, justifiable and worthy public object, and taking the service as a whole there would be no loss at all. Our free institutions rest on popular intelligence, and it has from the beginning been our fixed and enlightened policy to foster and promote the general diffusion of public information. Congress has wisely framed the postal laws with this just and liberal conception. It has uniformly sought to encourage intercommunication and the exchange of intelligence. As facilities have cheapened it has gradually lowered all postage rates. It has never aimed to make the postal service a source of profit, but simply to make it pay its own way and to give the people the benefit of all possible advancement. In harmony with this sound and judicious policy it has deliberately established a low rate of postage for genuine newspapers and periodicals, with the express design of encouraging and aiding the distribution of the recognized means and agencies of public information. It is not a matter of favor, but of approved judgment. It is not for the publishers, but for the people. But in adopting this special rate for a legitimate public end Congress has sought to restrict its privilege to legitimate publications with a manifest public aim and a clear public demand. It never meant to open the flood gates for an inordinate stream of purely private enterprises which have no public object whatever within the contemplation of the law, and which have seized upon the low rate of postage solely for private profit at the public expense.

THE INTENT OF THE LAW.

The intent of the law is clear from its terms. It seeks to define boundaries and to prescribe conditions which shall limit the privilege to the kind of publications really designed to be included. First of all, it provides that to be entitled to the second-class rate the publica-

tion must be "originated and published for the dissemination of information of a public character, or devoted to literature, the sciences, arts, or some special industry." This test has never really been enforced, and its rigorous enforcement is not now undertaken, for it raises questions which may be matters of opinion rather than of fact. Its strict application would, without any other test, manifestly rule out thousands of existing publications. But there are other tests which present matters of fact. The possession of the character thus defined is not enough. The law further requires that the publication must have "a legitimate list of subscribers." There must be not only a public object, but a real public call and approval, attested by general subscriptions. But even this is not all. A publication having all these characteristics might also have others which would plainly conflict with the intended prerequisite of having a distinct public purpose ratified by a distinct public demand. So the law adds the proviso that nothing in its terms "shall be so construed as to admit to the second-class rate regular publications designed primarily for advertising purposes, or for free circulation, or for circulation at nominal rates."

These provisions taken together plainly show the design of the law. Had they been strictly administered from the beginning admissions to the second-class rate would have been restricted to legitimate publications complying with the prescribed conditions, and there would be no such question as is now presented. But the administration has been in many hands. The applications for admission have gradually broadened. Every new case has made its special representation, and taken singly has pleaded no harm and no burden. Little by little the limitations have been relaxed, and every transgression has been made the pretext and precedent for another. Many of the publications once entered have changed their character since admission, and, if at first entitled to the pound rate, have by this departure forfeited their original right. In these various ways thousands of publications have come to enjoy the privilege which are not within either the spirit or the letter of the law, and the volume of second-class mail has been immensely swollen by a vast and questionable mass of printed matter which was not intended or foreseen when Congress, in the educational interest of the people, provided that the Government should practically pay the cost of transmission.

THE INDUCEMENTS FOR EVASION.

Under the practice hitherto prevailing there has been a great inducement to these private publishing enterprises. The two cardinal factors have been cheap paper and nominal postage. The production of legitimate newspapers and periodicals involves costly news service, large editorial staffs, expensive corps of contributors, and all the elaborate machinery of a complete intellectual and business organization. But

the manufacture of the kind of papers and periodicals which do not come within the terms of the law costs very little. The chief items are white paper and distribution. In 1885 the postage rate on second-class matter was reduced from 2 cents a pound to 1 cent. The price of white paper at that time was nearly 6 cents a pound. Since then it has gradually declined to 2 cents a pound or less, and with this great and concurrent reduction in the cost both of raw material and distribution, there is a direct and immense premium on these illegitimate outgrowths. The result is the upspringing of thousands of so-called periodicals which are established primarily for advertising purposes. They have few or no legitimate subscribers; they make up lists either by procuring names and sending the papers to them for nothing, or by offering premiums substantially equal in value to the subscription price, and so circulate at a nominal rate, thus being outside of the law at every point. They obtain advertising on the basis of this illegitimate circulation, and it makes a profitable business, for the chief cost to the publisher is the white paper, and the chief expense of the undertaking falls on the Government.

The extent of the complicity of the Government in these purely private enterprises is not generally realized. The statement will probably be surprising that in the case of hundreds of such publications, wherever the publisher spends $1,000 in his venture the Government spends not less than $2,000 in carrying on that publisher's business, and wherever he puts in $100,000 into its running expenses the Government puts in not less than $200,000. Astonishing as is this statement, it is easily made plain. As already indicated, the kind of publication in question involves very little of the cost of the legitimate newspaper or periodical. It has no news service. Its editorial staff consists of a single hand for scissors and paste pot. The composition and presswork, reduced to a single copy or pound, are infinitesimal. The only material expense is the cost of white paper, which runs about 2 cents a pound. That is the publisher's side of the account.

The Government's side comprises two items. The first is transportation. The entire circulation of these papers is through the mails, and the Government pays for carrying them not less than 5 cents a pound, on which it gets back 1 cent. The second item is handling. It has already been shown that this cost is at least 2 cents a pound. It results then that for every 3 cents the publisher pays toward the cost of the business the Government pays 6 cents, and for every $1,000 contributed by the publisher the Government contributes not less than $2,000. In other words, the Government is the senior partner on the debit side of the business. It furnishes the larger part of the capital, and while it pays about three-fourths of the expenses, all of the receipts go to the private partner.

GROWTH OF SECOND-CLASS MATTER.

Under this stimulus of cheap material and Government partnership the volume of second-class matter has grown to immense proportions. Within ten years it has more than doubled. In 1890 the aggregate weight of mail subject to the cent-a-pound rate of postage was 174,046,764 pounds. Last year it reached 429,444,573 pounds. The number of admissions to the second-class rate is significant in the same direction. There is no record prior to 1888, as before that time applications were made to postmasters and passed without the supervision of the Department. In 1888 the number of admissions was 3,076, and it increased year by year until in 1896 alone 7,041 distinct publications were entered. If these entries were not partially offset by discontinuances, the increase would be amazing. Since 1896, with a more stringent enforcement of the law and regulations, there has been a decline. Last year there were 4,985 admissions, of which 3,322 were new, and 1,663 old publications in new form, while 1,981 were denied entry because not conforming to the statutory requirements.

Of this vast mass of second-class matter it is estimated that one-half does not come within the meaning and intent of the law and is not rightfully included in that class, and thus is not entitled to be mailed at the pound rate. This estimate is based upon an investigation of the records, and upon the judgment of experienced postmasters and trained experts. If it be difficult at first to believe that the proportion of wrongly classed matter is so large, two considerations will make it clear. On the one hand, the entire circulation of the questionable matter goes through the mails, for with its scattered range it has no other method of distribution. On the other hand, the great body of the newspapers of the considerable cities, where requiring transportation, go for the most part in bulk on the railroads outside of the mails. Most of their circulation is within a radius of two or three hundred miles. Within that circle they are transported in bulk for less than the postage rate. The Government carries for three thousand miles at the same rate as for three miles. If the abuses now under consideration can be eliminated it will be entirely feasible to establish zones with graduated rates, and to carry newspapers and periodicals in bulk within a limited radius for half a cent a pound. But as the case now stands, and with a just understanding of these facts, the estimate will be readily accepted that one-half the volume of second-class mail is of the character which the law never intended should possess its privilege.

THE ACTUAL LOSS.

This gives the prodigious aggregate of 200,000,000 pounds of mail a year which the Government is carrying and delivering at 1 cent a pound and which ought either to pay the third-class rate, equal to 8 cents a

pound, or not to be carried at all. Not counting the expense of handling, it costs the Government $10,000,000 a year to transport this matter. It returns in postage $2,000,000, thus involving a direct loss on transportation alone of $8,000,000. If it be charged with its fair share of the total cost of the mail service on the very conservative calculation heretofore given, the loss to the Government is not less than $12,000,000. That amount is three times the postal deficit of the last fiscal year. Had that loss not been sustained there would have been a surplus of $8,000,000.

The Government is thus not only contributing largely and rightly to the distribution of legitimate newspapers and periodicals with a public object and coming within the law, but it is paying a subsidy of $12,000,000 a year for purely private publishing enterprises, run solely for private profit. How great a burden this is and how it stands in the way of just public undertakings will be plain on a moment's consideration. This wrongful subsidy would pay substantially the net cost of extending rural free delivery over all the feasible part of the whole country. It would pay, if not all, at least the greater part, of the loss of revenue involved in penny postage on drop letters. It would pay the cost of three battle ships. It would pay the largest amount that has been proposed to be set apart for the upbuilding of a great American merchant marine and leave $3,000,000 to spare every year.

This great abuse, which has been repeatedly condemned by my predecessors, is so flagrant and so hurtful and obstructive to all postal progress that the Department has felt impelled to undertake measures for its correction. The needed reform has been sought by legislation, and legislation which shall make a more precise and distinct definition of what shall constitute second-class mail matter and which shall bring within reasonable bounds some of the privileges that are now grossly stretched, sample copies for example, is eminently desirable and important. In the absence of such additional legislation the Department is limited to the application of the law as it is, and as much of the evil that has grown up has come because even the safeguards now provided have been neglected, a more strict enforcement of the existing law will, it is believed, accomplish much good. The rulings and measures adopted to this end have been directed to three distinct kinds of infraction of the law: First, a prohibition of the transmission of "returns" or unsold copies at the pound rate; second, the exclusion of books from the second class; third, the restriction of publications which have not a legitimate list of subscribers or are published primarily for advertising purposes.

NO LAW FOR RETURN COPIES.

There never was any warrant of law for the sending of return or unsold copies of periodicals at the pound rate. The practice has

grown up through loose methods and sheer assumptions. The law is designed to aid in the sale of the legitimate periodicals. With this object it authorizes their transmission at the lowest rate to subscribers or to news agents who dispose of them to purchasers. But it authorizes this only for sale and not for return. It means to carry the periodicals out to people who want them, but not to carry them back at a heavy loss when they are not wanted. It is not conceivable that the law contemplated the issue of an unlimited excess above any known demand and the return of the excess at the same rate to the source of origin. There is no claim that the publishers have what is called the return privilege, but because the law permits news agents to send to other news agents, evidently for the purposes of sale, the pretense has insidiously grown up that the publications may be sent out and allowed to remain on sale for an indefinite time, and that then, when the sale is exhausted, those left over can be sent back at the pound rate to the news company, which is the chief distributor, for redelivery to the publishers. This is claiming for the agent a privilege which is denied to the principal, and is manifestly a mockery of reason. Moreover, it imposes upon the Government the double burden of carrying the same matter forward and backward at a double loss.

Under this unwarranted practice the publishers of many meritorious periodicals have undoubtedly fallen into the way of printing an issue that exceeds the number of subscriptions or reasonable expectation of sale. The advantage of having an ample supply on exhibit and the natural limitation of the orders of news agents when returns are more costly are fully appreciated. But is there any just ground of complaint or any real hardship in the new order? Let a practical test be applied. Let it be supposed that a publisher sends out a ton of his publication beyond the subscriptions and regular sales. Let this extra ton be for news-stand display and possible extra calls. If it be all sold, nothing is lost to the publisher. But suppose the entire ton remains unsold and is returned, what is the difference in practical effect?

Under the old unlawful practice the postage on the return would be 1 cent a pound. Under the new ruling it will be 4 cents a pound. To the publisher, then, the possible additional cost of a whole ton of excess and waste is $60; but to the Government the actual net loss in sending out this extra ton is $80, and under the old practice the net loss in sending it back was $80. So that where the publisher under the reform runs a possible risk of an added cost of $60, the Government without the reform directly loses $160 on his operation, and even with the reform still loses $100. Is not the advantage of the transaction yet with the publisher? Whatever the ethics or equities of the case, the duty of the administrative officer is to follow the statute. The mailing of returns or unsold copies at the pound rate never had the sanction of law, and the Department is simply enforcing the law.

BOOKS AS PERIODICALS.

The second feature in the reform of the abuses of second-class mail is the exclusion of books and their relegation to their proper class. The law distinctly places books in the third class with a postage rate of 1 cent for 2 ounces. But through a palpable evasion of the law an enormous abuse has grown up in the transmission at the pound rate of large quantities of paper-covered books, printed and issued under the pretense of being serial publications. They are in no sense periodicals. They have none of the real characteristics defined by law as marking second-class matter. They are not continuous or consecutive. There is nothing in form or substance or treatment to differentiate them from books which are confessedly in the third class and make no other claim. Through the mere device of being numbered and of being called a series, without any true serial character, they masquerade as periodicals, to the great loss of the Government, to the serious prejudice, in many cases, of the public morals, and to the grave wrong of the publishers of a better literature who resort to no such subterfuge. They are not lawfully in the second class and a just administration of the law requires their exclusion.

It is the province of the Department to execute the law as it is, and not to be governed in administering it by a consideration of the ethical questions involved. But where great abuses have come through evasion of law, and where their correction is undertaken, it is proper to point out not only the financial, but the public and moral consequences which have ensued. Among the books which have been wrongly included in the second class are undoubtedly many of an intrinsically meritorious character. It is not meant to embrace all in a sweeping and indiscriminate condemnation. If the worthy books to which reference is made were in their rightful class, no objection could be offered. But it is equally true that large numbers of the books which are masked under the cloak of being periodicals, and so have secured the pound rate, are of a meretricious character, and when the Government is made to pay the chief expense in their production it has no right to be indifferent to their dangerous influence.

Cheap paper and cheap postage have wrought incalculable good in opening the avenues to cheap popular literature, but, as often happens in the progress of the world, the vast good is not unmixed with harm. They have also generated a pestilent brood of trashy and noisome publications. Many of the books in question are of the dime-novel order and are malodorous blood-and-thunder stories. They portray and glorify crime and outlawry. They inflame and debase the youthful mind. Their whole influence is pernicious, and tends to develop and promote the mental and moral disease upon which anarchy feeds and social disorder thrives. Our Government does not and can not establish

a censorship; it rightly leaves the protection of society to the wholesome educational influences which it properly encourages. But it is monstrous that, through the perversion of a fair and well-meant law, the Government should be made the leading partner and the chief cash contributor, as it has been, in the manufacture of a morally tainted literature, and it is a gratifying circumstance that the plain duty of enforcing the law will have the added merit of relieving the Government in large degree of this lamentable complicity.

PERIODICALS FOR ADVERTISING AND FREE CIRCULATION.

The third step in this vital reform is the rightful classification of periodicals which are obnoxious to the requirements for the second class in that they have not a legitimate list of subscribers or that they are published primarily for advertising purposes or for free circulation or for circulation at nominal rates. This measure is more difficult of execution than the first and second, because the lines are not so clearly drawn and the evasions of the law are more subtle and elusive. Returns can be absolutely cut off by one stroke. Books are easily recognizable and placed in their proper class. But it is a work of more delicacy and labor to determine whether many weekly and monthly periodicals are inside or outside of the prescribed and distinguishing requisites for admission to the second class. It requires a special examination in every case. The law was framed with the obvious intent of limiting the pound rate to what were understood and recognized as regular newpapers and periodicals serving a distinct public end. When a periodical has not "a legitimate list of subscribers" the law treats it as evidence that there is no public call for it and that it is not entitled to the privilege. When it is "devoted primarily to advertising purposes," that is held to be a private end which has no claim to special consideration. When it is issued mainly "for free circulation or for circulation at nominal rates," that again is taken as putting it outside of the limit, for free circulation means that the publisher and not the public determines the issue, and the law is made in the interest of the public.

These conditions and restrictions are rightly imposed as safeguards against the abuse of a liberal concession for purely private aims. They stand in the law and faithful administration requires its enforcement. Nevertheless, in hundreds and even thousands of cases, through ingenious devices and lax or tolerant supervision, admissions have been made and publications go on in complete disregard of these statutory limitations. When it costs so little to produce a publication of the type referred to, when it can be distributed for still less, when a substantially free circulation brings such profitable returns in advertising, there is a powerful temptation to carry on this business at the expense of the Government. One or two examples taken from the official records will illustrate where it leads.

SOME EXAMPLES.

There is a single periodical of which the copies sent through the mails for the quarter ending March 30, 1901, averaged 223,688 pounds for each issue, or about 112 tons or nearly 8 carloads, reckoning the weight of a carload of paper at 30,000 pounds. For transporting each issue of that periodical the Government actually paid $11,184.40, against which it collected $2,236.88 in postage; it also paid $4,473 for handling, making a direct net loss to the Government on every issue of $13,421. As compared with this cash gift by the Government, the publishers, besides the postage, paid about $4,473 for the white paper, and, as shown by an expert reckoning, $127.16 for composition, all these items together amounting to $6,837. There is not a well-informed publisher in the country who would not say that $500 was an extremely liberal allowance for all other expenses, making a total cost to the publishers of $7,337, as against a net cost to the Government of $13,421; so that the Government contributed about $6,084 more on every issue to the expense of running that publication than the publishers themselves contributed.

But this is only one side of the story. The publication in question does not conform to the statutory characteristics of second-class matter. It was not originated and is not published for "the dissemination of information of a public character." It is not "devoted to literature, the sciences, arts, or any special industry." Nearly one-half of its circulation, not merely of one issue alone, but of all, is avowedly free, being made up of sample copies. Of the other half it is believed that the bulk is substantially free, being sent to procured names without charge, or to ostensible subscribers obtained through merchandise premiums substantially equal in value to the subscription price, thus making it a circulation at a nominal rate.

The object of this enormous free circulation is to establish a basis for securing advertising at a high rate, and an expert examination shows that the amount of advertising in a single issue at the published rate reaches $53,780. Thus we have the extraordinary spectacle of the Government being subjected to a direct loss of $13,421, for which all the people are taxed, in order that the publishers of this particular periodical may make a profit on advertising of $53,780, out of which they paid only $7,337 toward the cost of the enterprise. These, let it be remembered, are the figures of only one issue. Multiply them by the number of issues through the year and both the loss to the Government and the profit to the publishers run up into the hundreds of thousands of dollars. It is obvious that this publication is published "primarily for advertising purposes," and so is directly repugnant to the provisions of the law; and it is only a specimen of hundreds of others. A group of periodicals of the same character published by

one firm sends 4,482,824 pounds a year through the mails, to transport which costs the Government $224,141, and on which its net loss is $179,312. Still another periodical mails 159,243 pounds of a single issue, the carrying of which involves a loss to the Government of $6,369.72. These illustrations might be multiplied indefinitely.

To correct the various abuses thus indicated, the Department has undertaken a more strict application of the law, through three orders directed to the several objects which have been described, and the subject is treated somewhat at length because it is felt that the reasons for its action should be clearly understood. The full results of the reform will not be realized at once. It is first necessary to enforce the lawful classification, which is a work of some time. This will either relieve the mails or bring more revenue, or do both. The postal force, both in the post-offices and on the railroads, will also be measurably relieved of the excessive strain now placed upon it, and if it can not be diminished it will at least gain more freedom for better service in other directions, and the constant and urgent pressure for an increase in order to keep pace with the heavy demands will be lessened. The cost which the abuses have entailed on the Government can be approximately calculated, as given above, but the saving depends on the degree of thoroughness with which the reform can be executed, and can not be accurately estimated. It will, however, when fully realized, amount to several million dollars a year, and will not only make the service self-sustaining but permit important advances on other lines.

THE DEPARTMENT EXECUTES THE LAW.

It is to be borne in mind that in engaging in this work the Department is not assuming to make or extend the law. That is the prerogative of Congress. The Department is simply administering the law as it finds it. It is charged with the duty of issuing certificates of entry to the second class, and incident to that duty it must determine whether the conditions requisite to such a certificate are fulfilled. The number of new applications is about 5,000 a year. The Department must decide whether they are entitled to admission or not. It can not with a sense of duty admit those which do not meet the statutory requirements. But to apply the law rigorously to new applicants and not to apply it in the same way to existing publications would be unjust to the former and would be to leave a monopoly to the latter.

It is plain that in this situation choice must be made between two alternatives, either to let down the bars and admit books and unlimited returns and advertising sheets and periodicals of free circulation without any practical restraint, or else to undertake to enforce the law with a just and even hand. What the former means is manifest. Even with more care the weight of second-class matter increased 50,000,000

pounds last year. That increase of a single year involved a dead loss to the Government of $2,000,000 on transportation alone. If the evil is to go on without check, the public wrong will be still further magnified, the burden will constantly swell and an intelligent, systematic and comprehensive policy of improved service will be needlessly trammeled and embarrassed. There is only one just and safe course, and that is to remand these noxious growths which have fastened on the mails to their rightful class or cut them off altogether.

INTEREST OF LEGITIMATE PERIODICALS.

In this work of reform the legitimate newspapers and magazines have an interest as immediate and vital as that of the Government and people themselves. No criticism falls on them and no laying of the axe at rooted evils menaces their position. They ask no favors. They stand on their rights. With their fixed place, their public object, and their regular body of readers, they are the direct objects of that deliberate and enlightened public policy which in the interest of the people fosters the recognized sources of public intelligence. They observe and fulfill the requirements of the law. And because they do they have the more concern in eliminating those which do not.

It is morally impossible that the flagrant abuses which have been depicted shall go on uninterruptedly and unceasingly. If, with their palpable obstruction of postal advance for the advantage of all the people, and with their shameful misuse of the public treasury for private ends, they are left unchecked, they will sooner or later rouse a storm of opposition which will strike undiscriminatingly at the special rate that is perverted to the illegitimate purpose. Not only do they wrongfully deplete the postal revenues, but they taint and harm a great business by injurious methods on unequal ground; and legitimate publications, for the honor of their own mission and work, and in their own interest, will welcome and sustain the effort for the enforcement of the law and the maintenance of its just standard. The redemption of the postal service from the incubus which works a great injustice to the people and to all law-abiding publishers and which impairs the power of the Department for efficiency and improvement in many directions is felt to be the highest duty, and to that duty the Department addresses itself, relying on the support of all who would have the law faithfully observed.

RURAL FREE DELIVERY.

The rural free delivery has advanced with increased strides. Its extension during the past year has been nearly three times as great as the whole amount of service previously established. The number of routes in operation at the beginning of the fiscal year was 1,276, and at the close 4,301. During the current year, with an augmented appropriation and a more experienced force, the work will proceed still more rapidly. At the opening of December 6,009 routes will be running, and under present plans the number will increase by July 1, 1902, to 8,600.

The rural population now receiving daily service is about 4,000,000, and at the end of the fiscal year it will reach 5,700,000. The delivery system will then cover more than a quarter of the eligible portion of the country, and at the present rate of establishment the entire area suited to the service—that is, as estimated, a million square miles of territory with 21,000,000 of rural residents—will be brought within its scope in less than four years. The mail will then, if the work goes on, be delivered at every door in the United States except in the most remote, mountainous and sparsely settled sections, and in villages of limited receipts where the post-office is within easy reach. The demand for the service grows with the public experience of its convenience and utility. The number of applications for new routes at this time last year was 2,159. Those now pending and awaiting action amount to 6,129. Thus the 6,000 routes which have been organized are only one-half of the number already asked for.

ADVANTAGES OF THE POLICY.

The policy of rural delivery is no longer a subject of serious dispute. It has unmistakably vindicated itself by its fruits. If the financial results are still undetermined and require greater experience and more complete data before a conclusive judgment can be pronounced, the practical benefits and the popular appreciation and demand have been decisively demonstrated. It has been made plain that this service is a potent educational force; that it brings agricultural life into far closer relations with the active business world; that it keeps the farmer in daily touch with markets and prices; that it advances general intelligence through the increased circulation of legitimate journals and periodicals, stimulates correspondence, quickens all interchanges, promotes good roads, enhances farm values, makes farm life less isolated and more attractive, and unites with other wholesome influences in checking and changing the hitherto prevailing current from country to city. The national value of these advantages is incalculable. They are not theoretical, but real, direct and immediate. In diffusing them

the beneficent agency of the Government is brought into the daily presence and thought of the people. A service which has within three years wrought such a great improvement in the conditions of rural life can not be halted. It must go on until it shall be fully completed.

A closer consideration of the material interests involved enforces this conclusion. On an average there are 125 families on a route. Under the old system they traveled from 2 to 4 miles in going to the post-office. If the cost in time and other factors be reckoned at 10 cents a day for each family, it is clearly a moderate estimate. That made an aggregate of $12.50 a day. The Government can deliver the mail at the doors of all for $2. Why shouldn't it do so and save them the larger burden? Extend the calculation to the whole country. There are about 4,000,000 families dependent on the rural service. The aggregate cost to them of going to the post-office reaches an enormous sum. The Government can carry the post-office to them for a fraction of the amount. Under such circumstances the claim to the service becomes irresistible. It is the business of the Government to deliver the mails as far as practicable. The apprehended obstacles to rural delivery have largely vanished with actual experience, and the manifest advantages, now clearly shown, urge the full development of the policy.

Even the fear that the ultimate cost of this service would so far exceed the return as to make it a heavy national burden is sensibly dissipated by the results of the experimental trial. It is demonstrated that the establishment of rural delivery is invariably followed by a large increase of postal receipts; on the other hand, it permits a material retrenchment through the discontinuance of star routes and small post-offices; and the combined effect of the augmented revenue and the considerable saving brings the net cost of the delivery system to proportions which may be regarded without apprehension. The saving during the last twelve months on star routes thus superseded was $173,404.41, and on post-offices discontinued it was $120,221.43. The two together amount to one-sixth of the entire appropriation for this service.

THE INCREASE OF REVENUE.

The increase of revenue is equally marked. An analysis of the returns for the last fiscal year shows that in the free-delivery offices the increase of receipts averaged 11 per cent; in the nondelivery Presidential offices 3½ per cent, and in the strictly rural sections 2⅕ per cent. Long experience has made it clear that under the old conditions the annual rate of growth of postal revenue in country communities is about 2 per cent. But wherever rural delivery has been established this annual gain has risen to 8 or 10 per cent. The ratio of increase

on the rural routes is substantially equal to that of the free-delivery cities. This is as true of those which have been operated for three years as of those operated only for a year, showing that it is not an exceptional and transient expansion in the nature of a spurt, but that it is the normal, uniform, and legitimate increase which always follows improved facilities. In the ten complete county services which have been established this is more marked than in the fragmentary system, proving that the more perfect the service the better the results. It is clear that if a saving can be effected in the curtailment of star routes and fourth-class offices to the extent of one-sixth of the cost of rural delivery, and if the annual gain in postal revenues shall advance wherever it is applied from 2 per cent to 8 or 10 per cent, then the net outlay involved in the complete development of the system will not be so great that it need deter Congress from the prosecution of this enlightened policy.

MAKING THE SERVICE PERMANENT.

With its acceptance as a fixed and enduring service the wisdom of placing it on a permanent basis and of bringing it into full harmony with the general principles of the postal establishment enforces itself. In authorizing rural delivery as an experiment Congress adopted no directing mandate and simply made the requisite appropriation. It did not undertake to prescribe the rules or methods of organization. It gave the Department full discretion to determine the means and select the agents for its trial. As the service was experimental in its nature, as its development depended upon the results of actual experience, as its progress might require changes in form and method, Congress deemed it wise to leave the plan flexible and capable of modification as observation dictated. It did not desire to restrict the freedom of the Department to avail itself of the best suggestions and the ripest fruits of the practical test. The controlling object was to determine the feasibility and utility of rural delivery, and the yearly enlargement of the appropriation in the same unlimited terms indicated the purpose of Congress to allow full latitude for the amplest trial and the development of the best agencies and methods of application.

With this discretionary authority the existing system has been created. At the beginning of the fiscal year 1899 there were less than 200 routes in operation. There are now 6,000. The organization necessary for this large establishment has been made; the agents to locate and the inspectors to examine the operation of these routes have been appointed; the carriers, who daily traverse the routes and collect and deliver the mail have been named; and these more than 6,000 selections have been made without friction, and, it is believed, with little complaint. The merit principle of appointment has substan-

tially been applied, and no removals have been made except for cause. Both the clerical administrative force and the force in the field have been chosen with care, upon grounds of fitness and qualification, and none have been named who were not believed to come up to a high standard of integrity and capacity. Out of this method has grown a body of faithful and earnest employees, who, it is confidently felt, will compare favorably in intelligence and efficiency with any part of the civil service.

APPLICATION OF CIVIL SERVICE RULES.

In my last annual report this subject was thus referred to:

> The selection of agents charged with the duty of organizing and laying out the routes, and of carriers charged with the handling of the mails, has been made with great care. A high grade of intelligence, aptitude, and fidelity is required, and it is believed that the results thus far justify the methods pursued. The enlargement of the service will entail greater organization and expenditure, and should be surrounded with every practicable safeguard. If the extension of rural delivery is to be entered upon as a settled policy, the attention of Congress should be directed to its requirements with a view to the adoption of such principles of organization as its wisdom may approve.

The condition thus indicated is now realized. Rural delivery may be accepted as a settled policy, and it may well be brought within the principles of the permanent service so far as they are applicable without obstructing its development or impairing its efficiency. The civil-service rules may properly be extended to the special agents, the route inspectors, and the clerical force, and their admission to the classified service will not only give the sense of security which their careful selection and intelligent efficiency merit, but will, in their high character, in nowise derogate from its established standard. So far as the general administrative force is concerned, there is no need for further discretion in appointment or in tenure.

In considering the method of selecting the rural carriers, however, care must be exercised not to retard the establishment of the service which is so urgently demanded and not to embarrass its operation. The function and relations of the carrier are surrounded with special conditions which can not safely be disregarded. They involve possession of the necessary carrying equipment, long familiarity with the route, knowledge of the people on the part of the carrier and confidence in the carrier on the part of the people, ready availability of substitutes with the same equipment, and other considerations which do not enter into ordinary appointments. Every reasonable safeguard for selections on merit, with a view to the character of the service required, should be provided. But when we consider that routes are being established at the rate of 400 a month, that they are scattered over all the States, and that the special agents in organizing the routes have the

opportunity of personally examining the proposed carriers, who are afterwards brought also under the review of the inspectors, the wisdom of not surrounding the selection with difficulties that may impede or thwart the very object sought will be apparent. The rules needed are simple rules, which will make merit the test, permit prompt action, give secure tenure, and protect the efficiency of the service.

CUBA.

The postal service in Cuba, under the reorganization effected last year, has been conducted with the highest degree of fidelity and efficiency. The revenue for the fiscal year 1900 was $246,912.31, and for the fiscal year 1901 it was $367,634.50, showing an increase of $120,722.19. This increase was due, not to an expansion of the postal business, but to a faithful accounting of moneys received. The expenditures for the fiscal year 1900 were $598,497.69, and for 1901 they were $451,437.89, showing a decrease of $147,059.80. The deficit was thus reduced from $352,585.38 to $83,803.39. These statements summarize the results of a careful and honest administration. Notwithstanding the large retrenchment of expenditures, the service has been greatly improved, and it is now in excellent shape for such disposition as the course of affairs in the island may require.

PHILIPPINE ISLANDS.

In the Philippine Islands the service has been somewhat extended as the general conditions have improved and the need for intercommunication has increased. This extension has entailed larger cost, and the expenditures have, for the first time, passed the receipts, the deficit for the year being $36,470.06. Outside of Manila and the larger towns nearly all the revenue is derived from the army and the employees of the Government. The civil-service system is in full operation, and since September 19, 1900, all employees have been appointed after civil-service examination. The need of a regular transportation service between the islands becomes more apparent with the return of normal conditions, and measures for the establishment of such service will receive careful consideration.

OCEAN-MAIL SERVICE.

Under the act of 1891, to provide for ocean-mail service between the United States and foreign ports and to promote commerce, six contract routes for ocean-mail service are now in operation at a cost of $1,448,968 per annum. The latest contract went into effect November 1, 1900, and was with the Oceanic Steamship Company for carrying the mails from San Francisco to Sydney, New South Wales, calling at Honolulu, Pago Pago, and Auckland. This is the only

service under the act on the Pacific. Its inducements have not yet proved sufficient to elicit proposals for a direct contract service between the Pacific coast and the Orient. The importance of a more direct, speedy, and regular communication with the Philippine Islands will be universally recognized. Such communication might be provided in connection with mail service to Japanese and Chinese ports, and its advantage to the commercial and general interests of the country is apparent. The promotion of a merchant marine and the illustration during the recent Spanish war of the value of fast mail steamers as auxiliary cruisers in times of emergency enforce the wisdom of making the act for the extension of ocean-mail service effective wherever it is practicable.

THE PNEUMATIC-TUBE SERVICE.

The pneumatic-tube service in New York, Philadelphia, and Boston was suspended with the close of the last fiscal year. The contracts then expired, Congress failed to make further appropriation, and the service ceased. A strong public appeal came for its continuance, and proposals were made looking to that object without expense to the Government. But the Department accepted the attitude of Congress as decisive of its desire and purpose until it could review the question. It would be unfortunate, however, in the judgment of the Department, if the suspension were more than temporary. Delays have ensued in the transmission and delivery of the mails, and the business interests which have been injuriously affected earnestly seek the reestablishment of the service. The report of the expert commission appointed in 1900, which was transmitted to the last Congress and to which attention is again invited, was a searching exposition of the subject, and fully upholds the pneumatic system, within defined limits, as an important, valuable, and necessary accessory of mail communication. To strain fast mail trains and then partially defeat their object by slow wagon service at the great terminals is a contradictory and incongruous policy. The Department renews its request for an appropriation of $500,000 for the restoration of the pneumatic service, and I earnestly commend it to the favorable consideration of Congress.

PARCELS POST.

Though the parcels-post conventions have existed for several years between the United States and various countries of this Continent, the convention with Germany was the first made with any nation in Europe. Its operation has been awaited with interest as throwing light upon the question of extending such relations. The results of one year's experience are now available. The aggregate weight of parcels received from Germany was 233,690 pounds, as against 51,484 pounds

sent from the United States; the average weight of the former was 7.44 pounds and of the latter 2.44 pounds. To all countries with which we have conventions we sent 252,791 pounds, and from them we received 281,813 pounds, of which all but about 48,000 came from Germany. Other countries in Europe seek parcels-post conventions with us, but it may be a question how far a foreign service of this character should be extended before a domestic parcels post shall be inaugurated. The establishment of a domestic system is a question for Congress.

MONEY-ORDER TRANSACTIONS.

The volume of money-order transactions during the last five years has increased 56 per cent. During the last fiscal year the receipts of this branch maintained, for the 305 working days, an average of $973,814 daily, and amounted for the year to $294,618,680.99, an increase over the previous year of $39,000,000. The number of money-order offices in operation at the close of the fiscal year was 30,529, a net increase of 880 over the previous year. This increase was small, owing to the fact that the establishment of rural free-delivery routes resulted in the abolition of many small offices. The volume of money-order business, however, shows no diminution because of this fact.

FREE-DELIVERY SYSTEM.

The free-delivery system in cities now serves 32,000,000 patrons at a cost of 50 cents each per annum. On July 1 last 866 cities and towns were included in the system, in which at least two mails per day were delivered and collected by the 16,389 carriers employed.

MAIL-TRANSPORTATION SERVICE.

The length of domestic or inland mail routes was increased during the year by 10,818 miles, or 6,940,285 miles in annual travel, the total number of such routes of all classes at the end of the fiscal year being 35,316, aggregating 511,808 miles in length and an annual travel of 466,146,059 miles. This comprehensive service involved an expenditure of $56,810,242.05, an increase of $1,664,182.29 over the previous year.

The transportation of the mails in Hawaii and Porto Rico, the cost of which is now included in the general appropriation for that purpose, has, since my last report, been completely reorganized, and there are now in Hawaii 57 routes, with a total length of 4,349 miles, and in Porto Rico, at the end of the fiscal year, there were 41 routes, with a length of 4,754 miles.

STAR SERVICE.

The number of star routes at the end of the year was 22,797, with a total length of 267,357 miles. The annual travel necessary to perform service on these routes amounted to 134,404,541 miles, for which contractors received $5,204,416.86. These figures show an increase in length of routes of 2,500 miles; in annual travel, 343,680 miles, and in rate of expenditure, $71,038.46.

New contracts were made during the year to cover the star-route service in the New England and Middle States, and Maryland, Virginia, and West Virginia. There were 5,820 routes involved in this letting, aggregating 46,870 miles in length and 29,984,920 miles in annual travel, an increase over the old contracts of 219,284 miles of travel.

These new contracts contain the requirement that the contractor shall reside on or contiguous to the route awarded him, and that the carrier, whenever desired by the addressee, shall deliver mail into boxes erected along the route; and the same provisions will be incorporated in contracts to be let shortly for service in the States west of the Mississippi River. The practice prevailing in former years of permitting a contractor to sublet the service has been discontinued except in cases where sufficient reasons are given and the Department is convinced after investigation that the proposed subcontractor is in every way qualified to render satisfactory service. It is hoped by such methods to eliminate gradually the possibility of poor, underpaid service often rendered by subcontractors under the old system.

THE SERVICE IN ALASKA.

Much thought has been given to the needs of Alaska. The existing service of four mails a month from Skagway, via Dawson, Circle, and intermediate points, to St. Michael and Nome was arranged last winter, and will be maintained during the present season. Additional service has been provided whenever made necessary by the fluctuating tide of settlers, and the Department endeavors to follow the prospectors as closely as is practicable. There is now a semimonthly service between Valdez and Circle, with a provision for carrying a limited amount of other than letter mail, a feature that it has been found impracticable heretofore to incorporate in contracts for Alaskan service. Other less important points are now served with greater or less frequency as the needs of the settlers dictate, and it is safe to say that, considering the very unfavorable conditions under which service in Alaska must necessarily be performed, the inhabitants of that Territory are enjoying a reasonably satisfactory service, which the Department will endeavor to improve. It may be of interest to note that the Alaskan service now comprises 29 routes, with a length of 22,059 miles, involving annual travel amounting to 665,067 miles, at a cost of $293,046.99 per annum.

AUTOMOBILE TESTS.

The first contract for the carriage of mails by automobiles was entered into during the last fiscal year for service between the post-office at Buffalo and the station in the Pan-American Exposition grounds, a distance of 4¼ miles. This distance was covered in thirty-five minutes, and there were seven trips daily. The service rendered proved satisfactory, and a contract will go into effect on January 1, 1902, for similar service in Minneapolis, which will afford a still better test of the adaptability of the automobile for service in large cities.

RAILROAD TRANSPORTATION.

For the year ending June 30, 1901, the sum of $33,881,390 was paid for the transportation of the mails on the 2,746 railroad routes in operation throughout the United States, showing an increase of $456,408.09 in the annual rate of expenditure. The annual travel on these routes reached a total of 302,613,325 miles, an increase of 5,357,022. The customary reweighing of the mails, for the purpose of making the quadrennial readjustment of pay as required by law, was made on all the railroad lines in the first contract section, including the States from Maine to West Virginia, and resulted in an approximate increase of pay of $1,094,556, or 14.58 per cent.

ELECTRIC-CAR SERVICE.

At the close of the year there were 326 electric and cable car routes in operation, having a total length of 2,956 miles, traveling 6,589,408 miles, and costing the Government $362,614.17. The increase in length of routes was 610 miles, in annual travel 889,105 miles, and in annual rate of expenditure $44,331.75.

THE RAILWAY MAIL SERVICE.

This service was extended during the year so that on June 30 there were 1,306 lines of traveling post-offices, covering 182,154 miles, and employing 9,182 clerks, whose annual travel in crews amounted to 210,221,576 miles. To accomplish this 3,774 cars and apartments were used on steam railroads, 20 cars on electric and cable lines, and 72 apartments on steamboats. During the year the clerks of the Railway Mail Service handled 14,181,224,420 pieces of ordinary mail and 21,284,833 packages, cases, and sacks of registered mail, with an average of only one error to every 10,626 correctly distributed.

During the year there were more casualties in the Railway Mail Service than in any similar period since its organization, the total number being 825, in which 7 clerks were killed, and 63 seriously and 229 slightly injured. I beg to invite attention to the remarks on this

subject contained in the current report of the Second Assistant Postmaster-General, and to renew my recommendation for legislation for the relief of the families of railway mail clerks who are killed while on duty. Congressional action has been recommended by this Department for some years, and is urgently needed for relief in deserving cases of this kind.

POSTAL REVENUE.

The postal revenue from all sources was as follows:

Sales of stamps, stamped envelopes, newspaper wrappers, and postal cards	$102,023,473.03
Second-class postage (pound rates), paid in money	4,294,445.73
Box rents	2,915,853.14
Money-order receipts	1,668,659.29
Receipts from unpaid money orders more than one year old	430,755.43
Letter postage paid in money, principally balances due from foreign postal administrations	199,412.68
Miscellaneous receipts	52,172.01
Fines and penalties	30,829.30
Receipts from unclaimed dead letters	15,592.78
Total receipts	111,631,193.39
Excess of expenditures over receipts	3,923,727.48

EXPENDITURES IN DETAIL.

The expenditures of the postal service for the year are shown, by items, in the following statement:

Transportation of the mails on railroads	$33,523,902.18
Compensation to postmasters	19,949,514.79
Free-delivery service	15,752,600.00
Compensation of clerks in post-offices	12,840,738.60
Railway Mail Service	9,675,436.52
Transportation of the mails on star routes	5,143,211.11
Railway post-office car service	4,408,639.53
Transportation of foreign mails	2,004,249.60
Rent, light, fuel for first, second, and third class offices	1,942,692.76
Mail-messenger service	973,471.98
Manufacture of stamped envelopes	570,441.86
Transportation of the mails—regulation, screen, or other wagon service	734,438.61
Transportation of the mails on steamboats	508,444.48
Special-delivery service	544,785.38
Mail depredations and post-office inspectors	492,859.27
Mail bags and catchers	265,077.86
Transportation of the mails—electric and cable cars	330,894.61
Manufacture of postage stamps	253,000.00
Transportation of the mails—special facilities	167,010.40
Manufacture of postal cards	156,702.37
Miscellaneous items at first and second class offices	221,709.55
Balance due foreign countries	144,385.03

Blanks, blank books, etc., for money-order service	$99,228.66
Registered package, tag, official, and dead-letter envelopes	101,000.00
Wrapping twine	159,622.76
Renting of canceling machines	145,817.79
Stationary for postal service	69,695.05
Experimental rural free delivery	1,749,525.06
New territory and military postal service	227,175.67
Compensation to assistant postmasters—first and second class offices	1,339,333.97
Payment of money orders more than one year old	88,164.98
Pneumatic-tube service	222,254.00
	114,806,024.43
Expenditures under twenty-two smaller items of appropriations	233,582.66
Total expenditures for the year	115,039,607.09
Add expenditures during the year on account of previous years	515,313.78
	115,554,920.87

THE REGISTRY SYSTEM.

Statistics show a striking increase in the volume of business transacted by the registry system, and a consequent increase in the postal revenue. During the period covered by this report 20,814,501 pieces of registered matter, paid and free, passed through the mails, on which the sum of $1,409,382.24 was collected as registry fees, showing an increase of $177,947.36.

Early in the year the registry facilities were extended to our troops on duty in China, and the system, under changed conditions, worked with its accustomed smoothness and security.

LOSSES OF REGISTERED MAIL.

Complaints of loss of registered mail were received to the number of 8,033. Investigations were made and concluded in 5,394 of these cases, with the result that actual loss was found to have occurred in only 314, or an average of but 1 piece to every 44,666 handled by the Department.

LOSSES OF ORDINARY MAIL.

The records show that 100,255 complaints were made alleging losses of ordinary mail matter, of which, in the 63,642 that were investigated it was found that in 12,576 no actual loss had been sustained.

THE SUPPRESSION OF FRAUD.

The statute directed against the use of the mails in the conduct of fraudulent schemes is seen to operate in a most wholesome way. Indeed, the authority contained in this provision of law now seems, after an experience of its operation extending over a period of about

eleven years, to be absolutely essential to the preservation of the integrity of the mails. The public has a right to expect that the Post-Office Department will use all possible means to protect it in its business dealings carried on through the medium of the post-office, and to see that schemes to deceive and to defraud are traced to their sources and their operators punished.

In this connection it seems proper to state that the enforcement of the law concerning lotteries and frauds has been so faithfully and vigorously conducted that there is no longer within the limits of the United States a regularly organized or chartered lottery doing business through the mails. The Louisiana Lottery, after finding that it was uprooted, transferred its plant to Honduras, and from that locality, through the medium of agencies established in different localities in the United States, transferring its literature to said agencies by express, was enabled to revive many of the objectionable features of its former business. Then followed the amendment to the interstate-commerce law, by means of which much of this improper business was cut off. So it can now be said that the Louisiana Lottery transacts no business in this country except through some secret channels not altogether yet discovered.

What is stated of the Louisiana Lottery Company may be extended to all other regularly organized or chartered institutions of this kind. There may be, and doubtless are, some concerns that transact limited business by the aid of messengers, but it can be positively stated that they do not use the mails, unless it is to a limited extent under sealed communications, which there is no possible means of lawfully detecting, except by the merest accidents.

Frauds of various kinds, great and small, are yet carried on through the mails to some extent. They are inaugurated mainly by tradesmen, by publishers of publications of a doubtful character, cigar and tobacco dealers, and some compounders of quack medicines, etc., but each of these concerns as it comes to the notice of the Assistant Attorney-General for this Department, or to the inspectors' corps, is promptly suppressed. The law which authorizes the Postmaster-General, upon evidence satisfactory to him, to put the mail matter of these concerns out of the mails is so arbitrary that it is enforced with great care and caution. Many persons thoughtlessly and without intention to defraud adopt experiments to stimulate their private business, and very unexpectedly find themselves within the domain of fraud. In such cases they are dealt with as leniently as possible, and yet the law is enforced so far as the enforcement of it devolves upon the Post-Office Department. In other cases, where the promoters have adopted schemes for the evident purpose of obtaining money or property under false or fraudulent representations or promises, they are not only put out of the mails under the provision of the law which

authorizes the issuance of "fraud orders," but they are also handed over to United States attorneys for prosecution under the penal clause of the statute.

There is cause of congratulation that the statute of September 19, 1890, under the provisions of which lotteries have been suppressed and frauds eliminated, has succeeded to such an extent in purging the mails of improper matter. It is not probable that all kinds of impure and objectionable matter will be put out of the mails for some time to come, if ever. The spirit which prompts people to gamble, to take risk for the purpose of gain by questionable methods, operates to induce many people, ordinarily moral and upright, to take risks in furthering small and apparently innocent schemes in the face of the law. A very few of these, however, are extensive enough to arouse public alarm.

Without intending to comment extensively on them, it is proper to add that there is a class of companies or concerns in the country—very numerous and claiming to own capital in very large amounts—known as "bond investment" and "tontine" schemes, that are located in a number of States. All of these, it may be stated, in a general way, offer the sale of securities by a number of fanciful names as, for instance, certificates, coupons, debentures, etc., on the installment plan, promising large returns thereon, which, in most instances, are impossible of being earned by any known system of finance. These are under the constant watchful inspection of the Assistant Attorney-General and the inspector's force, and whenever it is discovered that one of them is violating the law by encroaching upon the authority of the Department, as many of them do, they are at once put on the "fraud list," and in extreme cases handed over to the courts.

DETAILS OF ADMINISTRATION.

The transportation of the mails by steamboat was performed during the year on 189 routes, 33,970 miles in length, with an annual travel of 4,652,257 miles, at an annual expenditure of $542,985.32. This is an increase in length of routes of 7,969 miles, in annual travel 347,315 miles, and in cost $27,938.19.

There was an increase of mail-messenger routes of 163, making a total of 7,353 in operation on June 30 last, with a total length of 5,091 miles and 10,541,346 miles of annual travel, costing $995,811.76.

There were 5,701,033,286 pieces of stamped paper issued to postmasters, with a value of $104,739,002.49, showing an increase of 379,208,412 in number, or 7.12 per cent, and $7,073,861.35 in value, or 7.24 per cent, over the preceding year.

The issue of stamp books of convenient size has continued to be popular with the public, as is evidenced by the fact that 4,698,423

were sold last year with a profit to the Department of $46,984.23 over the value of the stamps.

In April, 1901, a special series of six stamps, in commemoration of the Pan-American Exposition at Buffalo, was issued by the Department, and by the end of the fiscal year the sale of this issue amounted to $3,849,600.

A new domestic postal card will very shortly be issued under a contract recently executed. This card will be of an entirely new and improved design, and will bear in the upper right-hand corner a likeness of the late President McKinley.

There were 51,428 letters and packages registered by rural free-delivery carriers on their routes, an average of about 12 pieces to each carrier.

Under the law authorizing the payment of an indemnity not exceeding $10 for the loss of a registered piece of mail, 151 claims were allowed, amounting in the aggregate to $1,034.38. Of these cases, 69 were for the maximum allowance and 82 for smaller sums.

During the year 7,133,263 pieces of mail were received at the post-offices for special delivery, an increase of 854,514, on which the additional postage was $713,326.30. As the total expense of the special-delivery service was but $545,598.57, including the cost of manufacturing the stamps, the sum of $167,727.73 accrues as net profit to the Government. The total number of messengers employed at free-delivery offices was 2,583, who required on an average 16.17 minutes to make delivery.

Second-class matter was mailed at 9,620 post-offices, an increase of 78 over the preceding year. The total amount of this class of matter (paid and free) passing through the mails was 461,219,837 pounds, which, after deducting newspapers and periodicals mailed free in counties of publication, paid $4,294,445.73 postage.

The number of pieces of mail matter of all classes handled by the postal service during the fiscal year reached the total of 7,424,390,329. As near as can be estimated, the several classes were divided into the following proportions: Letters, prepaid and official, 3,604,322,767; postal cards, 659,614,800; newspapers and periodicals, or second-class matter, 2,206,791,539; third and fourth class matter, 953,661,223.

At its last session Congress authorized the publication of a small pamphlet containing general postal information, to be distributed free to the public at the various post-offices. This pamphlet is now nearly completed, and will soon be ready for circulation.

On June 30, 1901, there were 76,945 post-offices, divided as follows: First class, 208; second class, 940; third class, 3,318, and fourth class, 72,479. During the year there were 3,294 post-offices established and 3,037 offices were discontinued. As has been the case in recent years, many offices were discontinued by reason of the rapidly increasing

growth of the rural free-delivery service, which covers the same territory far better and more satisfactorily, and 1,226 post-offices were discontinued last year for that reason. The establishment of rural free-delivery routes during the fiscal year also resulted in the discontinuance of star-route service costing $131,710.42.

The number of postmasters appointed during the fiscal year was 15,657, of which 15,068 were of the fourth class and 589 of the Presidential grade.

There were 1,611 persons arrested during the year for infractions of the postal laws, of whom 327 were charged with burglarizing post-offices. Of the remainder 101 were postmasters; 40 assistant postmasters; 65 clerks in post-offices; 10 railway postal clerks; 27 letter carriers; 43 mail carriers; 19 employees in minor places, and 979 were not employed in the postal service. Of the 1,032 cases disposed of by the courts, convictions resulted in 634 and 461 were left awaiting trial at the end of the year.

The aggregate amount of the penalties of all postmasters' bonds now in force is about $117,969,772.

At the commencement of the fiscal year 1901, 442 claims of postmasters for losses of funds resulting from burglary, fire, or other unavoidable casualty were pending, and during the year 1,217 such claims were filed, making a total of 1,659. Of these, 1,059 were considered, and allowances made amounting to $80,657.20. Claims to the number of 760 were allowed, while 299 were disallowed, withdrawn, or dismissed. The number pending on June 30, 1901, was 600. Of the total amount allowed for losses, $14,791.92 was for postal funds, $52,083.29 for postage stamps and stamped paper, and $13,781.99 for money-order funds. Of the total sum allowed, $28,147.37 was for losses by fire, $59,059.48 by burglary, $137.64 by robbery or larceny, $2,333.48 for losses of funds in transit from post-offices to depository offices, and $979.23 for losses due to miscellaneous causes.

LEGISLATION NEEDED.

The following recommendations for legislation, some of which have heretofore been made, are submitted for the consideration of Congress:

That the maximum fee for a money-order be fixed at 25 instead of 30 cents.

That a fund be created out of the salaries of railway mail clerks to provide for the retirement of such clerks as have, after long periods of service, become incapacitated for active duty.

That publishers be required to make a preliminary separation of newspapers, under the direction of the Department, as a condition under which they shall enjoy the exceedingly liberal rates provided for carrying second-class matter through the mails.

That a building be provided in the city of Washington to be used wholly or in part by the mail bag and mail lock repair shop and as a depository for mail bags.

That section 3 of the act of June 13, 1898, chapter 446, providing that assistant postmasters, cashiers, and other employees in post-offices of the first, second, and third classes shall give bond direct to the United States be repealed, and that a statute be enacted requiring such officers to give bond directly to the postmasters and holding postmasters responsible under their own bonds for any and all acts and defaults occurring at their respective offices.

That provision be made for the payment of incidental expenses incurred by local officers or others in the arrest, detention, and keeping of prisoners charged with violations of the postal laws until such prisoners can be transferred to the custody of a United States marshal.

That a statute be enacted authorizing post-office inspectors to take out search warrants whenever the same may be necessary in the prosecution of their official duties.

That an appropriation be made for the purpose of constructing lookouts wherever, in the opinion of the Postmaster-General, they may be needed.

That the interstate-commerce law be amended to prohibit common carriers, to wit, telegraph and express companies, or any of their employees, from aiding and abetting in the green-goods or lottery swindles, or any other scheme carried on partly by mail and partly by common carrier and which is in violation of the postal laws.

In concluding this report, I have pleasure in making grateful acknowledgment of the efficiency and fidelity of my assistants and of the chiefs of division in the performance of their respective duties.

Very respectfully,

CHARLES EMORY SMITH,
Postmaster-General.

PAPERS

ACCOMPANYING

THE REPORT OF THE POSTMASTER-GENERAL.

REPORT OF THE ASSISTANT ATTORNEY-GENERAL FOR THE POST-OFFICE DEPARTMENT.

OFFICE OF THE ASSISTANT ATTORNEY-GENERAL
FOR THE POST-OFFICE DEPARTMENT,
Washington, November 16, 1901.

SIR: To the office of the Assistant Attorney-General for the Post-Office Department is assigned, by virtue of the regulations, the duty of giving opinions to the Postmaster-General or the heads of the several offices of the Department upon questions arising upon the construction of the postal laws and regulations, or otherwise, in the course of business of the postal service, with the consideration and submission (with advice) to the Postmaster-General of all claims of postmasters for losses by fire, burglary, or other unavoidable casualty; and of all certifications by the Auditor for the Post-Office Department of cases of proposed liability to the United States, and of the remission of fines, penalties, and forfeitures under the statutes; the keeping and preparation of all correspondence with the Department of Justice relating to prosecutions and suits affecting or arising out of the postal service, and with the consideration of applications for pardon for crimes committed against the postal law which may be referred to this Department; with the preparation and submission (with advice) to the Postmaster-General of all appeals to him from the heads of the offices of the Department depending upon questions of law; with the hearing and preparation of cases relating to lotteries and the misuse of the mail in furtherance of schemes to defraud the public; with the examining and, when necessary, drafting all contracts of the Department, and with such other like duties as may, from time to time, be required by the Postmaster-General.

LAW OPINIONS.

In the order of the duties enumerated above, I have the honor to report that during the fiscal year ended June 30, 1901, this office gave 603 official written opinions on legal questions. Of these 189 related to bond-investment schemes, 269 to miscellaneous schemes which were considered under the lottery law of September 19, 1890, and 145 on miscellaneous questions on bonds, leases, contracts, and all laws affecting the postal service except the act above referred to. In connection with these written opinions probably a greater number of verbal

opinions were given to officers of the Department who called in person for advice on minor questions. A comparison of this line of work with that of the last fiscal year shows an increase of 43 written opinions.

POSTMASTERS' CLAIMS.

The disposition of claims for alleged losses by fire, burglary, and other unavoidable casualties under the act of Congress approved May 9, 1888, and June 11, 1896, is shown by the following table:

Unsettled claims on hand July 1, 1900		442
Claims received during the fiscal year covered by this report		1,217
Total		1,659
Claims allowed during the fiscal year	760	
Claims disallowed during fiscal year	299	
Total settled during the year		1,059
Claims remaining unsettled June 30, 1901		600
Loss by fire		$18,147.37
Loss by burglary		59,059.48
Loss by robbery and larceny		137.64
Loss of funds in transit from post-offices to depositaries		979.23
Loss by miscellaneous causes not enumerated above		2,333.48
Total		80,657.20

(See appendix.)

Comparing the work of this branch of the office with the previous fiscal year, it will be noted that there is an increase in the number of claims presented, in the number allowed, and in the amount of the loss, the latter items being: Total loss for the fiscal year ended June 30, 1900, $80,230.30, and for the fiscal year ended June 30, 1901, $80,657.20.

COMPROMISES, REWARDS, AND PARDONS.

Only nine "compromise cases" containing offers to settle indebtedness to the Department under the authority of sections 295 and 409, Revised Statutes, were submitted to this office. These were returned to the Postmaster-General with written advice for final action thereon.

There were 87 claims for reward for the arrest and conviction of persons violating certain postal laws, which claims arose under offers promulgated by the Postmaster-General at different times, received at and considered by this office.

Sixty applications for pardon from persons convicted of violating postal laws were referred to this office for report and recommendation by the Attorney-General, which were duly considered and reports and recommendations made thereon.

FRAUD ORDERS.

Probably one of the most important duties connected with this office is the hearing and preparation of cases relating to misuse of the mails under the law authorizing the issuance of "Fraud orders"—the act of September 19, 1890, as amended by the act of March 2, 1895. While this act was conceived with the object of simply preventing the use of the mails in the promotion of lotteries and schemes devised for obtain-

ing money under false or fraudulent pretenses, representations, and promises, one of the consequences of a "Fraud order" is the destruction of all business operated through the mails under the name against which the order is issued, and it frequently happens that a person or concern is operating both a legitimate and an illegal business under the same name. It is, however, impossible to separate the two. Realizing the severity of a "Fraud order" on the person against whom it is issued and the extent of the power thus put into the hands of the Postmaster-General (and by regulation intrusted to this office), whenever possible, if a prima facie case is presented against the accused party, he is summoned to appear at this office and show cause why such an order shall not be issued against him, thus giving full opportunity to make any defense he may deem proper before final action thereon.

While some do not accept the opportunity to appear at this office with counsel, the greater number do in fact appear and contest the issuance of the order. In some cases the hearings have been of two weeks' duration. During the fiscal year opportunity has been given in 83 cases to thus show cause why a "Fraud order" should not be issued. In 15 cases, relating to foreign lotteries which were plainly lotteries upon the face of the literature transmitted through the mails, no such calls were made, it being impracticable. During the fiscal year 42 "Fraud orders" were issued against persons or concerns operating schemes devised for fraudulent purposes, 4 against lotteries operated in this country, 1 against a bond-investment company, which was a combination fraud and lottery concern, and 15 against foreign lotteries. Of the 62 "Fraud orders" thus issued, 4 were subsequently revoked on evidence that the schemes against which they were directed had run their course and that no more mail was coming to the addressees named in the orders.

In addition to the cases of alleged fraud disposed of in the manner above indicated, large numbers of complaints which are sent to the inspectors' division under the Fourth Assistant Postmaster-General are referred to this office with reports from inspectors after investigation of their operations. These are carefully reviewed, and when evidence does not establish a prima facie case of fraud, the papers are returned with request to further investigate or with instruction to close the same. The number of cases thus handled by this office can only be approximated. There are between 1,600 and 1,800.

While a record is kept showing correspondence with the Department of Justice on prosecutions and suits arising out of the postal service, it is not in such statistical form that I can cite the number of cases, as the force of this office is so constantly occupied with more important work that records thereof can not be reliably kept.

BOND-INVESTMENT SCHEMES.

For several years this office has been annoyed and embarrassed by a class of so-called investment concerns which have come to be known under the general title of "Bond-investment companies," bearing names and titles coextensive with the vocabulary of corporate literature, which have sprung up in a number of States, becoming themselves n merous, and advertising the possession of capital aggregating millions of ollars. They offer the sale of bonds, certificates, deben-

tures, or other securities by whatever fanciful name designated on the installment plan, promising dividends or other returns impossible of earning by any process known to legitimate business systems.

These concerns were quite uniformly condemned in this office—some as lotteries, others as frauds on their face, while many combined the elements of both—and all of them denied by statute the privilege of the mails. To satisfy the real or pretended objection of the promoters to the rulings of this office, and at their request, several test cases were submitted to the Department of Justice, and opinions in response thereto were received from the Attorney-General affirming the previous rulings of this office. A number of cases were in some form or another brought before the courts and were there condemned without exception.

Finally, in the hope of permanently fixing the status of these concerns, about one hundred sample cases were selected and grouped into thirteen classes, representing every phase of the financial plans and contracts then in existence, and all were held to be lotteries or fraudulent schemes, devised as such, or frauds consummated and declared to be unmailable. The opinion was exhaustive and was supported by the calculations of able professional actuaries, showing how the proposed plans would not finance out, and also by reference to the decisions of courts and copious citations of other legal authorities. It was printed in pamphlet form and mailed to almost or quite all the companies or associations then known to this office. Whoever, after reading that opinion, persevered in the conduct of an unlawful scheme of this general character blundered knowingly.

Many of the old concerns, as well as new adventures, bowing to this opinion, came with revised contracts and amended plans, submitting them for decision. Carefully and patiently each was considered on its merits; many of them were rejected, and few were approved. The authority, when granted, to use the mails was in every instance communicated through official channels after writing out in detail the covenants or contracts and the specifications of the plans, the promoters being required to sign written agreements that they would adhere strictly thereto and not depart therefrom.

Thus we were able to maintain some kind of espionage over their operations. A very few have kept their faith, while a larger number have furnished ample reason for suspecting their intentions and business, and others have been condemned for willful disregard of the agreements and intentional violation of the law. It may be stated without reserve that the whole brood of bond-investment associations, without regard to name or intentions, is wide open to suspicion. To capture patrons (who, as a rule, are persons of small means easily lured into ventures to get something for nothing by resorting to chance) these promoters go to the full limit of roseate and glittering advertisements—go, indeed, just as far as they dare venture in offering profits on investments without fear of being caught up on the provision of the law which closes the mails to "schemes devised to obtain money, etc., on false and fraudulent representations, promises," etc. Unfortunately, they do not stop at this point, but through agents and divers other ways enter into contracts impossible of fulfillment, in direct disregard of their written promises to keep closely within the lines approved by the Department.

The inquiry naturally arises, Why is consent ever given for the use of the mails in the furtherance of schemes so generally rotten and so

seldom conducted on honest lines? To this inquiry the answer is easily given, that this department has no legal right to deny the privilege of intrusting anything to the post which is all right on its face, not prohibited by law, and that has not been proven to be fraudulent. An accomplished fraud is an offense proven, and is not to be discovered by inference. We frequently consent to the acceptance of matter in which a fraud lurks, although not visible—more often in connection with bond-investment schemes, in proportion, than in any other kind of business. The only way to prevent the continuance of such schemes to the loss of the public is to keep them under careful and constant surveillance; and I know of no way to do this so effectively as to detail employees of the Department to make frequent examinations of the records and into the operations of each concern. Satisfactory investigations can not be conducted by sending out inspectors selected from the regular force, as they would be for the conduct of ordinary official investigations. The framework of these questionable concerns is skillful and intricate. Only one trained as an actuary, or in some business akin thereto, is competent to overhaul the complicated records of one of these concerns, which is managed by shrewd and designing manipulators. Therefore I respectfully suggest that special authority of law should be given and appropriations provided for the employment of two or three experts as post-office inspectors detailed to the sole duty of policing the entire field of bond-investment companies and kindred concerns.

FORCE OF THE OFFICE.

In making up the estimates for the law and clerical force of this office, which, I believe, have been embodied in the Book of Estimates, I recommended an appropriation of $2,000 to pay an additional law clerk. A similar recommendation was made in my last annual report, having also been embodied in the Book of Estimates, but Congress in its wisdom chose to provide only one additional clerk, at the salary of $1,000, and wholly ignored the recommendation for authority to appoint another law clerk. I now earnestly renew that recommendation, and suggest that a mere glance at the statistics presented herein as to the amount of work done in the office will furnish all the evidence needed as to the wisdom of the recommendation.

It is easy to write that over 600 legal opinions were written out by this office during one year, and that other business, referring to the examination of bonds, leases, contracts, and other postal matters, together with the personal conferences that go on every day, required the giving of verbal opinions upon law points to the extent of hundreds; but when it is stated that the responsibility of having all these opinions accurate devolves almost exclusively upon two persons, the Assistant Attorney-General and his assistant, it will be discovered that the volume of work placed upon them is very large. There ought by all means to be employed herein at least one law clerk, a person learned in the law, whose services can rarely be obtained at the small compensation named. I would be glad to have the compensation of the assistant attorney now provided by law increased to $3,000, and an additional law clerk authorized at $2,500. But for the present, at least, notwithstanding the enormous growth of the business of the office, which runs parallel with the growth of the postal service, I would be content with the authority to employ a law clerk, or another assistant attorney, at the small compensation of $2,000.

In addition to the head of the office and his assistant there are four stenographers employed, three of whom have been law students, whose services are of considerable assistance in looking up legal authorities and in conducting other law work; but their duties are mainly of a clerical order. One stenographer, who is essentially a private secretary, is employed, but not in connection with the consideration of law questions.

In addition to these persons, who are employed in the law branch proper of the office, the claims division, which imposes constant and heavy work, is conducted by two clerks only. A reference to the appendix accompanying this report will give a slight idea of the vast work that devolves upon and is performed by these two clerks.

EDITING AND PUBLISHING OPINIONS.

I recur again to the necessity of printing in book form the opinions of the Assistant Attorneys-General for the Post-Office Department. Every day brings evidence of the need of such volumes. The earliest opinions of this office are now nearly thirty years old. The number of these opinions, themselves forming the sole guide for the entire business of the postal service, is sufficient to fill several volumes. The reasons for desiring the publication of these volumes were so concisely presented in my last annual report that I venture to copy a paragraph of what was stated therein, to wit:

> I am reluctant to close this report without again calling your attention to the importance of publishing the opinions of the Assistant Attorneys-General for the Post-Office Department. The office was created by the act of June 8, 1872, revising the laws relating to the postal service, and it has heretofore been filled by some able lawyers and by two or three learned jurists of long experience, whose opinions would rank with the best decisions of our ablest courts. These opinions cover questions arising along the entire range of postal laws, international and domestic, and relating to contracts of all kinds, the construction of statutes, the powers and duties of all postal officials, and, indeed, all subjects connected with postal administration. They exist in thousands of pages of manuscript and typewritten matter, comparatively useless in their present form, and almost inaccessible. No argument is needed to show that this condition should not, for the good of the service, longer exist. These opinions should be printed and bound, and I earnestly recommend that Congress be asked to provide a sufficient appropriation to cover the cost of editing, printing, and binding them.

Very respectfully, JAS. N. TYNER,
Assistant Attorney-General for the Post-Office Department.

The POSTMASTER-GENERAL.

REPORT OF THE FIRST ASSISTANT POSTMASTER-GENERAL.

POST-OFFICE DEPARTMENT,
FIRST ASSISTANT POSTMASTER-GENERAL,
Washington, November 16, 1901.

SIR: The report herewith which I have the honor to submit shows the operations of this bureau for the fiscal year ending June 30, 1901, but it necessarily refers to various transactions and statistics brought down to the date hereof. These operations continue to reflect the extraordinary growth of the postal service which for several years has been so frequently the subject of comment as to become almost

monotonous. This marvelous expansion is of course due in a large degree to the prosperous business conditions prevailing since about the year 1896.

A brief reference to the figures set out in detail in other parts of this report shows that in the five years just passed the number of Presidential post-offices has increased from 3,651 to 4,489, or 23 per cent; the salaries of postmasters have increased from $16,908,384.35 to $19,949,515, or 18 per cent; the allowances for clerks in first and second class offices from $10,382,061 to $11,723,514, or 13 per cent, while in the free-delivery branch of the service the number of free-delivery offices has increased from 627 to 866, or 36 per cent; the number of carriers from 12,834 to 16,389, or 28 per cent; the cost of the service from $12,713,861 to $15,752,600, or 24 per cent, with an increase of gross receipts at free delivery offices of from $52,567,604 to $74,295,394, or 41 per cent.

Within the same period the rural free-delivery service has been established and on June 30, 1901, the carrier force had grown to 4,301, which by December will number 6,000, delivering mail daily to 4,000,000 people. The transactions of the money-order business during the same five years have increased from $188,071,056.27 to the enormous sum of $294,618,680.99, or 56 per cent. So, too, in every other branch and division of the service there have been constant and unusual advances.

A review of these facts is sufficient to account for the renewed requests for increased appropriations, which are absolutely necessary to enable the Department to keep abreast with the constantly growing business of the postal service.

Much space is taken in this report in detailing the conditions and progress of the free rural delivery system, but not more space, it is believed, than the importance and interest of the subject deserve. The very careful personal interest which you have taken in this service at every stage of its development has been a great factor in its successful growth. Results of the operations during the present year confirm the prediction made in your last annual report of its ultimate extension throughout all parts of the country where its establishment is practicable.

CLASSIFICATION OF THE RURAL-DELIVERY SERVICE.

The rural-delivery system as a branch of the postal service was originally authorized by act of Congress, appropriating a small sum for the purpose of an experimental test of its feasibility, and has been carried on year by year under similar but greatly increased appropriations. The appropriation for the current fiscal year reads as follows:

> For experimental rural free delivery, including pay of carriers, horse-hire allowance, supplies, and mechanical appliances, three million five hundred thousand dollars.

Upon this meager legislation the Department has through departmental rules and regulations built up an administrative system by which the results set forth elsewhere in detail have been accomplished. Congress generously confided to the discretion of the Department the determination of the means by which this "experimental" delivery should be inaugurated and carried on. The language in which this appropriation was made was construed to evince the wish of Congress that the Postmaster-General should use the widest discretion in the

choice of agents and methods in testing its practicability. As the conditions were entirely novel, the difficulties unknown, and the methods of administration without precedent, definite legislation was practically impossible.

Indeed, the first experiments under Postmaster-General Wilson were not successful, and it was only after the earlier mistakes had been rectified and avoided that the system became established on a solid basis. The renewal of these experimental appropriations for this service from year to year, without any limitation upon or direction to the Department, indicated that the Department had correctly interpreted the intent of Congress, which was to afford the widest scope for testing the feasibility and value of the service and develop the best methods for its initiation and management.

The system thus built up, on such slender foundations of legislation, has now been operated with great success for several years, and while not perfect, is progressive and adaptive to new conditions and new requirements suggested by experience.

It was held by the legal advisers of the Department that the discretion thus vested in the Postmaster-General by the terms in which the appropriation was made gave him the right to select such agents for carrying on the test as he might deem proper, without compliance with the rules governing appointments to the classified service. Under this discretionary power, also acquiesced in by Congress, such clerks, route inspectors, and special agents were selected as were deemed necessary for the proper development and administration of the system. These selections have been made with care and with a due sense of responsibility, and none have been admitted into the service who were not believed to have the qualifications of integrity and ability which should be demanded of every Government employee.

The result of this selection is a corps of intelligent, industrious, and faithful employees, to whose enthusiasm and zeal no little share of success of the system must be attributed.

The organization of rural free-delivery service, in charge of the General Superintendent, free-delivery system, is as follows:

One chief special agent.

Three special agents in charge of divisions, with headquarters at New York, Indianapolis, and Denver. (Southern division in charge of chief special agent, headquarters Washington.)

Forty-five special agents in the field.

One supervisor; headquarters at Washington.

Five district supervisors; headquarters New York; Philadelphia; Marietta, Ohio; Chicago; and Nashville. (Sixth district in charge of assistant superintendent, free-delivery system, San Francisco.)

Seventy-five route inspectors, working under the district supervisors.

Two hundred and five clerks, messengers, and charwomen at Washington and division and district headquarters.

In my last annual report it was stated as follows:

> I respectfully suggest that the service popularly known as "rural delivery" must hereafter be considered by the Department and provided for by Congress as a permanent and expanding feature of the postal administration.

The experience of another year confirms this view, and I believe that the time has arrived when this service must be deemed to have passed beyond the experimental stage and to be regarded as one of the established agencies of the Department.

I therefore respectfully suggest that Congress be asked to make this appropriation in the same manner as other appropriations are made, without further designating it as "experimental." The most noteworthy effect of such change in legislative language will be to remove from the Department the discretion now exercised of making appointments without certification from the civil service commission. There seems no good reason why the special agents, route inspectors, and clerical force of the system should not receive appointments and enjoy their tenure of office under civil service rules. The present force of trained and efficient employees whose experience makes them invaluable to the proper conduct of the business should also be classified in such manner as an Executive order may direct.

In regard to the rural carriers, however, it is a debatable question whether it is desirable at this time to withdraw from the Department the discretion now exercised in their appointment. While their selection is usually made on the recommendation of the Representative in Congress of the district or of the local postmaster, the special agent who inaugurates the route passes on the qualifications of the candidates for carriers, including their ability to furnish suitable conveyance for the transportation of themselves and of the mail, and under his instructions will not confirm the appointment of anyone who has not the capacity and character to make him a proper custodian of the rural mail.

As shown more in detail in this report, the relations between the rural carrier and the patrons of the route are such that it is possible that something of the effectiveness of the system would be lost if a method of selection were adopted which might secure carriers not enjoying the acquaintance and possessing the confidence of the people along the routes.

The rural carrier system is scattered over such a wide extent of country, much of it remote and originating in small offices, that there is danger that the difficulty of securing proper examining boards and obtaining eligible registers, already experienced in the appointment of clerks and carriers at the smaller free-delivery offices, may be aggravated to such an extent as to seriously embarrass and perhaps greatly obstruct the initiation of the service for which there is such an eager demand.

The system now in vogue has resulted in the selection of a force of efficient and faithful rural carriers, and the insignificant number of removals and reprimands for derelictions in duty shows the excellent character of the force and the faithfulness of their work.

But, if it should be deemed unwise at this time to change the method of selecting carriers, there is no good reason why they should not have the protection and sense of security which the civil-service system throws over incumbents of office in the classified service. It has been the distinct policy of the Department not to remove a carrier except for cause, but to permit him to hold his position during good behavior. But he is entitled to greater protection than is afforded merely by departmental policy, and he should have his tenure of office assured to him by law, unless he forfeits his right by misconduct.

DISTRIBUTION AND DISPATCH OF MAILS.

The Second Assistant Postmaster-General and the officials of this office have had under consideration the relations of the mailing divisions of the larger post-offices with the Railway Mail Service, having in view the securing of greater efficiency in the distribution and dispatch

of mails. The duties of the clerks in these two branches of the service are so intimately connected that it is believed that better and more economical results can be obtained by placing them under one management, so that their services may be interchangeable if required. This arrangement, if decided upon, should for the present be limited to a few of the larger offices, and if the results seem to justify it may be extended ultimately to such other offices as are likely to be benefited by the change. The matter is still under consideration, and if the details can be worked out satisfactorily the arrangement will be submitted to you for your approval.

TEMPORARY FORCE.

Congress at its last session made the following appropriation for the current fiscal year:

For continuing the employment of such additional temporary force of clerks and other employees rendered necessary because of increase of work incident to the war with Spain, as in the judgment of the Postmaster-General may be proper and necessary to the prompt, efficient, and accurate dispatch of the business of the office of the First Assistant Postmaster-General, twenty thousand dollars.

A similar appropriation of $17,850 had been made for the last fiscal year, and $13,400 for the previous fiscal year. Under the authority of this appropriation there is a temporary force of twenty-three clerks employed in this office. While the work of the bureau has greatly increased in the past three years, it can not be said at this time that it will be necessary to continue for another year this temporary force because of increase of work incident to the war with Spain; but as the work growing out of the war with Spain has gradually diminished, it has been found necessary to use the clerks of this temporary force to aid in the prompt, efficient, and accurate dispatch of the business of this office. Without their services, it would have been necessary to have had additional permanent clerks. Under the circumstances, it is not proposed to ask for a renewal of this temporary appropriation, but it is absolutely essential for the conduct of business that the services of these clerks should be retained; and in the estimate for clerical salaries for the next fiscal year the thirty-eight additional clerks asked for are intended to include the twenty-three clerks now on the temporary roll, so that the proposed net increase of the clerical force of this bureau is fifteen.

By the act of March 3, 1901, it is provided that the term of temporary service of such additional clerks and other employees as were rendered necessary because of increased work incident to the war with Spain, appointed in the various departments of the Government, be extended for the term of one year from June 30, 1901, without compliance with the conditions prescribed by the act entitled "An act to regulate and improve the civil service," approved January 16, 1883.

At the end of the present fiscal year the terms of these clerks will expire, but their services, or that of an equivalent number, will be required for the efficient dispatch of the business of this office.

It is fair to say that the clerks thus selected were chosen with due care and have proved by their capacity and faithfulness that they are fully competent to discharge the duties of their position; and having had an experience of from one year to two and one-half years each, it is desirable that their services should be retained and that they should be continued in the service by such Executive order as may be proper under the circumstances.

DIVISION OF SALARIES AND ALLOWANCES.

This division has the adjustment of the salaries of postmasters, assistant postmasters, and all other post-office employees, excepting letter carriers; allowances for advertising of unclaimed letters and of foreign mails; canceling machines and motors and power therefor; clerk hire; rent, fuel, and light for Presidential post-offices; military postal service, and miscellaneous and incidental expenses. Also supervision over the following: Bonds of clerks, box rents and key deposits, charges against clerks, Civil Service Commission correspondence relative to clerks, establishment and designation of stations and substations, hours of closing Presidential post-offices, leases at Presidential post-offices, leave of absence of Presidential postmasters, and sites of Presidential post-offices and stations and substations.

The following statement shows the operations of the division for the fiscal year ended June 30,1901:

Items.		Amount.
Allowances for clerk hire made first and second class offices		$1,527,000.00
Allowances for clerk hire continued from last year		11,282,000.00
Allowances for separating clerk hire made third and fourth class offices		160,826.00
Allowances for separating clerk hire continued from last year		826,213.00
Total annual allowances for clerk hire		13,796,039.00
Allowances for clerk hire reduced and discontinued		220,200.00
Allowances for separating clerk hire reduced and discontinued		61,437.00
Total annual allowances for clerk hire at first, second, third, and fourth class offices June 30, 1901		13,514,402.00
Allowances for temporary clerk hire		118,775.36
Allowances for substitutes for clerks on vacation		129,286.43
Allowances for assistant postmasters		1,468,200.00
Allowances for assistant postmasters reduced and discontinued		17,400.00
Total annual allowances for assistant postmasters		1,450,800.00
Allowances for rent, fuel, and light made first, second, and third class offices		248,592.00
Allowances for rent, fuel, and light continued from last year		1,830,485.00
Total annual allowances for rent, fuel, and light		2,079,077.00
Allowances for rent, fuel and light reduced and discontinued		31,310.00
Total annual allowances for rent, fuel, and light, June 30, 1901		2,047,767.00
Allowances for miscellaneous items and furniture made first and second class offices		225,016.72
Allowances for canceling machines made first and second class offices		148,728.02
Allowances for advertising made first and second class offices		21,345.62
Allowances for letter presses and typewriters, Money Order Service		4,996.10
Post-offices and stations in leased buildings	1,141	
Amount involved for rent of leased buildings		1,059,465.00
Rosters of clerks at first and second class offices approved	1,245	
Letters received	140,036	
Letters sent	125,243	

ADJUSTMENT OF SALARIES OF POSTMASTERS AT PRESIDENTIAL POST-OFFICES.

Salaries of postmasters at first, second, and third class (Presidential) post-offices are adjusted annually under the act of Congress approved March 3, 1883. In compliance with this provision, the eighteenth annual adjustment was made on the basis of the gross receipts of the respective offices for the four quarters ended March 31, 1901, to take effect July 1, 1901.

Statement showing the number of Presidential post-offices, by classes, July 1, 1901, the aggregate of salaries, and the total gross receipts, March 31, 1901.

Class.	Number of offices.	Salaries of postmasters.	Total gross receipts four quarters ended Mar. 31, 1901.
First	220	$771,600	$60,889,853
Second	1,026	2,403,000	15,407,112
Third	3,243	4,646,100	12,184,556
Total	4,489	7,820,700	88,481,821

The following table shows the result of the revision:

First-class post-offices:	
Number June 30, 1901	208
Second class advanced to first class July 1, 1901	12
Number July 1, 1901	220
Second-class post-offices:	
Number June 30, 1901	941
Second class relegated to third class July 1, 1901	1
Second class advanced to first class July 1, 1901	12
Third class advanced to second class July 1, 1901	98
Number July 1, 1901	1,026
Third-class post-offices:	
Number June 30, 1901	3,320
Third class relegated to fourth class July 1, 1901	7
Third class advanced to second class July 1, 1901	98
Third class discontinued July 1, 1901	1
Second class relegated to third class July 1, 1901	1
Fourth class advanced to third class July 1, 1901	28
Number July 1, 1901	3,243
First class July 1, 1901	220
Second class July 1, 1901	1,026
Third class July 1, 1901	3,243
Total Presidential offices July 1, 1901	4,489

Summary of adjustments of salaries of postmasters at Presidential offices July 1, 1900, and July 1, 1901, showing in detail the net increase in the number of post-offices and the salaries of said postmasters.

Date.	Number of offices.	Aggregate salaries of postmasters.
July 1, 1900	4,280	$7,423,600
July 1, 1901	4,489	7,820,700
Increase	209	397,100

This increase is shown in detail as follows:

Date.	Number of offices.	Aggregate salaries of postmasters.
Total number of first, second, and third class post-offices whereat increases were made July 1, 1901	1,771	$210,300
New Presidential offices during the fiscal year:		
Oct. 1, 1900	53	57,700
Jan. 1, 1901	116	128,500
Apr. 1, 1901	36	37,300
July 1, 1901	28	31,700
Total	233	250,200
Grand total of increase		460,500

Date.	Number of offices.	Aggregate salaries of postmasters.
REDUCTIONS.		
Relegated to fourth class July 1, 1901	7	$7,100
By reductions at 249 offices July 1, 1901		28,400
By Presidential offices discontinued:		
Westville, Conn., July 2, 1900	1	1,300
Woodfords, Me., July 2, 1900	1	1,500
Everett, Mass., July 2, 1900	1	2,500
Wollaston, Mass., July 2, 1900	1	2,400
Westport, Mo., July 2, 1900	1	1,600
Methuen, Mass., July 2, 1900	1	1,700
Camden Place, Minn., July 16, 1900	1	1,100
Anacostia, D. C., Aug. 1, 1900	1	1,300
West Duluth, Minn., Sept. 1, 1900	1	1,700
Woodhaven, N. Y., Oct. 15, 1900	1	1,800
Ozone Park, N. Y., Oct. 15, 1900	1	1,600
Olneyville, R. I., Nov. 1, 1900	1	2,300
Rankin Station, Pa., Nov. 1, 1900	1	1,400
Brewer, Me., Jan. 1, 1901	1	1,100
Walnuthill, Mass., Feb. 1, 1901	1	1,400
Westhaven, Conn., Mar. 1, 1901	1	1,700
Argenta, Ark., July 1, 1901	1	1,500
Total decrease	24	63,400
Net increase during year	209	397,100

The following table shows the result of the annual readjustment of postmasters' salaries for each year since July 1, 1892:

	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.
Number of Presidential offices on July 1.	3,177	3,340	3,402	3,491	3,651	3,733	3,821	4,014	4,280	4,489
Second-class offices advanced to first class on July 1	10	14	4	11	11	2	10	17	15	12
Third-class offices advanced to second class on July 1	74	43	26	63	68	33	64	91	110	98
Fourth-class offices advanced to third class, year ended July 1	216	207	124	139	192	139	111	215	284	233
First-class offices relegated to second class on July 1		1	6	1		2	3		1	
Second-class offices relegated to third class on July 1	7	12	33	18	12	24	15	6	7	1
Third-class offices relegated to fourth class on July 1	20	39	49	39	22	47	17	15	11	7
Presidential offices discontinued during year ended July 1	5	5	13	11	10	10	6	3	8	17
Increased salaries at Presidential offices on July 1:										
Number	1,348	1,121	694	1,061	1,415	704	1,475	1,709	1,914	1,771
Amount	$165,000	$138,000	$80,200	$133,100	$169,100	$82,100	$185,500	$213,800	$236,100	$210,300
Reduced salaries at Presidential offices on July 1:										
Number	142	284	701	394	250	575	299	211	171	249
Amount	$16,400	$36,600	$87,900	$50,100	$30,000	$65,000	$35,600	$25,200	$22,300	$28,100
Average salary of postmasters on July 1	$1,698	$1,697	$1,681	$1,689	$1,699	$1,688	$1,711	$1,726	$1,734	$1,742

Statement showing the number of Presidential post-offices (arranged by classes) in each State and the aggregate receipts for four quarters ended March 31, 1901.

State.	First class.		Second class.		Third class.		Total.	
	Number.	Amount.	Number.	Amount.	Number.	Amount.	Number.	Amount.
Alabama	3	$266,929	6	$83,936	39	$149,033	48	$499,898
Alaska					3	16,138	3	16,138
Arizona			4	60,898	14	49,673	18	110,571
Arkansas	1	85,818	8	149,450	44	157,627	53	392,895
California	5	1,571,831	32	496,594	98	376,742	135	2,445,167
Colorado	3	607,058	16	223,197	34	137,929	53	968,184
Connecticut	8	940,911	19	346,357	56	223,009	83	1,510,277
Delaware	1	98,794	1	10,283	12	45,713	14	154,790
District of Columbia	1	726,258			1	2,155	2	728,413
Florida	1	92,272	9	135,596	26	96,023	36	323,891
Georgia	4	628,232	12	163,584	41	164,756	57	956,572
Hawaii	1	89,576	1	8,420	3	6,656	5	104,652
Idaho			5	60,984	17	56,948	22	117,932
Illinois	15	8,396,419	62	877,200	210	824,695	287	10,098,314
Indiana	9	1,065,873	52	755,842	108	393,567	169	2,215,282
Indian Territory			3	27,689	21	71,025	24	98,714
Iowa	9	937,045	45	617,271	197	692,844	251	2,247,160
Kansas	3	312,223	30	454,127	105	398,131	138	1,164,481
Kentucky	4	680,837	14	201,786	52	187,890	70	1,070,513
Louisiana	2	545,005	6	72,523	27	95,243	35	712,769
Maine	3	363,023	16	236,637	50	184,256	69	783,916
Maryland	1	1,215,216	7	120,035	23	91,384	31	1,426,635
Massachusetts	17	4,700,282	63	976,026	96	387,793	176	6,064,101
Michigan	11	1,582,698	47	696,099	149	545,588	207	2,824,325
Minnesota	4	1,392,674	18	230,577	126	460,127	148	2,083,378
Mississippi			10	167,679	44	168,709	54	336,388
Missouri	5	3,144,246	29	385,816	125	444,251	159	3,974,313
Montana	2	115,234	7	105,548	17	67,216	26	287,998
Nebraska	3	612,091	11	145,951	101	367,809	115	1,125,851
Nevada			1	12,123	9	33,062	10	45,185
New Hampshire	2	126,644	13	187,251	33	129,886	48	443,781
New Jersey	12	1,448,751	46	816,863	62	249,693	120	2,515,307
New Mexico			3	41,205	11	44,663	14	85,868
New York	24	14,666,532	105	1,616,909	234	919,369	363	17,202,810
North Carolina	4	186,385	9	145,431	49	185,967	62	517,783
North Dakota	1	40,413	4	52,507	33	110,944	38	203,864
Ohio	13	3,853,587	67	1,047,754	157	511,681	237	5,413,022
Oklahoma			7	105,768	22	91,299	29	197,067
Oregon	1	226,400	7	84,328	28	100,694	36	411,422
Pennsylvania	15	5,767,204	96	1,427,385	212	867,504	323	8,062,093
Porto Rico			2	36,045	2	7,817	4	43,862
Rhode Island	3	512,337	5	71,583	13	43,708	21	627,628
South Carolina	2	136,074	5	62,414	29	124,142	36	322,630
South Dakota	1	40,123	7	81,798	43	147,473	51	269,394
Tennessee	4	697,120	5	75,851	51	189,154	60	962,125
Texas	7	686,677	29	399,712	129	484,514	165	1,570,903
Utah	1	141,729	3	50,359	11	32,823	15	224,911
Vermont	1	96,367	9	162,334	35	149,261	45	407,962
Virginia	3	454,298	16	301,787	48	177,932	67	934,017
Washington	3	369,521	7	90,016	38	135,485	48	595,022
West Virginia	2	134,087	10	167,055	33	127,013	45	428,155
Wisconsin	5	1,135,121	34	524,886	111	418,672	150	2,078,679
Wyoming			3	35,943	11	38,870	14	74,813
Total	220	60,889,853	1,026	15,407,412	3,243	12,184,556	4,489	88,481,821

Statement showing the number of Presidential post-offices (arranged by classes) in each State and the aggregate salaries of postmasters on July 1, 1901.

State.	First class.		Second class.		Third class.		Total.	
	Number.	Amount.	Number.	Amount.	Number.	Amount.	Number.	Amount.
Alabama	3	$9,700	6	$13,800	39	$56,000	48	$79,500
Alaska					3	5,100	3	5,100
Arizona			4	9,500	14	19,900	18	29,400
Arkansas	1	3,300	8	19,300	44	61,100	53	83,700
California	5	19,500	32	74,900	98	142,500	135	236,900
Colorado	3	10,500	16	36,800	34	50,700	53	98,000
Connecticut	8	26,200	19	46,700	56	83,100	83	156,000
Delaware	1	3,300	1	2,200	12	17,500	14	23,000
District of Columbia	1	6,000			1	1,100	2	7,100
Florida	1	3,300	9	20,600	26	37,400	36	61,300
Georgia	4	13,600	12	27,300	41	60,900	57	101,800
Hawaii	1	3,300	1	2,000	3	3,300	5	8,600
Idaho			5	11,200	17	23,300	22	34,500
Illinois	15	50,600	62	143,700	210	303,200	287	497,500
Indiana	9	29,400	52	121,800	108	152,300	169	303,500
Indian Territory			3	6,200	21	28,500	24	34,700
Iowa	9	29,400	45	102,300	197	278,800	251	410,500
Kansas	3	9,900	30	69,900	105	151,700	138	231,500
Kentucky	4	13,500	14	32,400	52	72,700	70	118,600
Louisiana	2	8,000	6	13,600	27	37,500	35	59,100
Maine	3	10,100	16	36,900	50	72,000	69	119,000
Maryland	1	6,000	7	17,000	23	34,200	31	57,200
Massachusetts	17	57,800	63	148,600	96	142,300	176	348,700
Michigan	11	37,800	47	111,100	149	211,700	207	360,600
Minnesota	4	17,300	18	41,200	126	178,000	148	236,500
Mississippi			10	23,600	44	62,900	54	86,500
Missouri	5	21,600	29	65,800	125	175,500	159	262,900
Montana	2	6,200	7	16,700	17	25,200	26	48,100
Nebraska	3	10,500	11	25,300	101	143,400	115	179,200
Nevada			1	2,300	9	12,700	10	15,000
New Hampshire	2	6,300	13	29,600	33	48,300	48	84,200
New Jersey	12	39,700	46	112,600	62	89,900	120	242,200
New Mexico			3	7,000	11	16,300	14	28,300
New York	24	88,200	105	247,300	234	342,400	363	677,900
North Carolina	4	12,400	9	21,000	49	69,900	62	103,300
North Dakota	1	3,000	4	8,900	33	44,900	38	56,800
Ohio	13	48,700	67	160,800	157	226,900	237	436,400
Oklahoma			7	16,300	22	32,600	29	48,900
Oregon	1	3,600	7	16,000	28	38,700	36	58,300
Pennsylvania	15	54,100	96	223,500	212	313,600	323	591,200
Porto Rico			2	4,800	2	2,700	4	7,500
Rhode Island	3	10,100	5	11,500	13	17,400	21	39,000
South Carolina	2	6,300	5	11,200	29	44,000	36	61,500
South Dakota	1	3,000	7	15,900	43	54,400	51	73,300
Tennessee	4	13,900	5	12,000	51	64,400	60	90,300
Texas	7	23,000	29	66,900	129	186,100	165	276,000
Utah	1	3,400	3	7,000	11	14,100	15	24,500
Vermont	1	3,300	9	22,300	35	52,800	45	78,400
Virginia	3	10,200	16	39,300	48	68,600	67	118,100
Washington	3	10,100	7	16,000	38	53,300	48	79,400
West Virginia	2	6,300	10	24,300	33	46,700	45	77,300
Wisconsin	5	19,200	34	79,300	111	158,600	150	257,100
Wyoming			3	6,800	11	15,000	14	21,800
Total	220	771,600	1,026	2,403,000	3,243	4,646,100	4,489	7,820,700

This table best illustrates the growth of our postal service during the last seven years, to wit:

	1894.	1901.
Number of Presidential offices July 1	3,402	4,489
Second-class offices advanced to first class	4	12
Third-class offices advanced to second class	26	98
Fourth-class offices advanced to third class	124	233
First-class offices relegated to second class	6	0
Second-class offices relegated to third class	33	1
Third-class offices relegated to fourth class	49	7
Presidential offices discontinued	13	17
Increased salaries, Presidential offices	$80,200	$210,300
Number of above offices	694	1,771
Reduced salaries, Presidential offices	$87,900	$28,400
Number of above offices	701	249
Average salary of postmasters July 1	$1,681	$1,742

ESTIMATES FOR POSTMASTERS' SALARIES.

The estimates, appropriations, and expenditures for salaries of postmasters for the last two fiscal years, together with the estimate and appropriation for the current fiscal year, are shown by the following table:

Year.	Estimate.	Appropriation.	Expenditure.
1899–1900	$17,000,000	$17,000,000	$19,112,097
1900–1901	17,000,000	18,000,000	19,949,515
1901–1902	18,000,000	20,000,000	

During the last year 233 fourth-class post-offices were advanced to the third class, 98 third-class post-offices were advanced to the second class, and 12 second-class post-offices were advanced to the first class.

I recommend that an appropriation of $20,000,000 be requested to cover compensation of postmasters for the fiscal year ending June 30, 1903, and that (as provided in last year's appropriation) any portion thereof saved by consolidation of post-offices under the law be made available for the payment of salaries of superintendents and clerks at stations established in lieu of the post-offices thus discontinued.

For compensation to assistant postmasters at first and second class post-offices:

Present.			Proposed.		
Number.	Salary.	Amount.	Number.	Salary.	Amount.
1	$3,500	$3,500	1	$3,500	$3,500
16	3,000	48,000	17	3,000	51,000
1	2,500	2,500	2	2,500	5,000
3	2,000	6,000	4	2,000	8,000
6	1,900	11,400	10	1,900	19,000
19	1,800	34,200	20	1,800	36,000
26	1,700	44,200	30	1,700	51,000
72	1,600	115,200	75	1,600	120,000
74	1,500	111,000	80	1,500	120,000
61	1,400	85,400	70	1,400	98,000
124	1,300	161,200	130	1,300	169,000
261	1,200	313,200	270	1,200	324,000
265	1,100	291,500	270	1,100	297,000
332	1,000	332,000	400	1,000	400,000
1,261	.....	1,559,300	1,379	.....	1,701,500

Commencing July 1, 1901, the cost of the postal service of Porto Rico and the Hawaiian Islands was included in the regular appropriations, instead of being paid out of the military appropriation, as heretofore.

The total expenditures on account of the military postal service are shown in detail in the following table:

	Porto Rico.	Hawaii.
Compensation to Presidential postmasters	$8,000.00	$8,300.00
Compensation to fourth-class postmasters	17,748.98	21,868.57
Special-delivery fees	1.92	74.60
Compensation to clerks at first and second class post-offices	15,115.02	28,678.64
Separating-clerk hire at third and fourth class post-offices	2,545.81	755.00
Compensation to letter carriers	7,816.41	600.00
Star-route service	18,190.37	6,132.32
Compensation to mail messengers	1,348.04	13,176.66

	Porto Rico.	Hawaii.
Compensation to railway post-office clerks	$1,972.08	
Railroad transportation of mails		$3,208.26
Steamboat transportation of mails	2,400.00	19,700.83
Rent and light at first and second class post-offices	1,426.60	513.00
Mail depredations and post-office inspection		31.52
Miscellaneous expenses	1,033.90	5,702.11
Cablegrams	111.38	
Total	77,710.51	108,740.91
Total cost of service in Porto Rico and Hawaii		186,451.42
MISCELLANEOUS.		
Compensation to clerks in China	6,240.27	
Expenses of clerks in China	3,554.16	
Cablegrams to China	325.32	
Miscellaneous expenses in China	1,419.51	
Total cost of service in China		11,539.56
Cablegrams to Manila		821.65
Cablegrams to Cuba		19.84
Compensation to postmaster, Pago Pago, Samoa		199.06
Clerk hire at military camps in United States		24,485.52
Miscellaneous expenses		3,658.62
Total cost of military postal service		227,175.67

RECLASSIFICATION OF CLERKS.

I desire again to urge upon Congress the necessity for a reclassification of post-office clerks in first and second class post-offices.

The classification act of March 2, 1889, does not meet the present needs of the service and offers no incentive or inducement for the bright and energetic young man to remain in the Government employ. The bill submitted with our last annual report has been very carefully considered, and provides for an annual increase in clerical salaries until the maximum salary for the designation is reached only where satisfactory evidence of the clerk's efficiency has been shown.

Notwithstanding the failure of these hard-worked and underpaid clerks to secure the enactment of a law for the reclassification of their salaries, the promotions accorded them through the generous action of the Fifty-fifth and Fifty-sixth Congresses has bettered their condition more perhaps than any other class of Government employees. In the year 1899 the average annual pay of post-office clerks was $788.

1900, average annual pay of post-office clerks	$790
1901, average annual pay of post-office clerks	818
1901, average annual pay of railway postal clerks	1,055
1901, average annual pay of letter carriers	903

Commencing July 1, 1901, almost every capable and energetic clerk receiving an annual salary of $300, $400, $500, $600, and $700 per annum who had been one year in the service received a substantial increase in his salary ($100 being the minimum), as follows:

Clerks.	Receiving—	Advanced to—
65	$300	$400
334	400	500
868	500	600
1,377	600	700
1,123	700	800
910	800	900
564	900	1,000

four-fifths of the appropriation available for promotions reaching clerks in the grades above mentioned.

In New York, Chicago, and many of the more important post-offices not only are the clerks greatly overworked, but the mails are seriously delayed as well. In order to avoid serious congestion it has frequently been found necessary to improvise pouch racks and distributing cases in railway depots and require railway postal clerks to perform extra duty, when supposedly off duty, between trips. The recent ruling of this Department, however, respecting second-class publications will ultimately relieve this strain, but the clerical force at the post-offices referred to needs a material strengthening in order to handle the growing mails properly and expeditiously.

In order to provide these clerks and to continue the policy inaugurated by Congress regarding increased salaries, obviously in the interest of an improved service, the following changes are recommended:

Clerks in post-offices.

Present.			Proposed.	
Salary.	Number.	Amount.	Number.	Amount.
$100	1,000	$100,000	1,300	$130,000
200	300	60,000	350	70,000
300	200	60,000	250	75,000
400	100	40,000	100	40,000
500	1,600	800,000	1,600	800,000
600	2,800	1,680,000	2,800	1,680,000
700	1,000	700,000	1,000	700,000
800	3,900	3,120,000	3,900	3,120,000
900	1,900	1,710,000	1,900	1,710,000
1,000	1,500	1,500,000	1,900	1,900,000
1,100	700	770,000	900	990,000
1,200	800	960,000	1,500	1,800,000
1,300	225	292,500	300	390,000
1,400	200	280,000	250	350,000
1,500	90	135,000	110	165,000
1,600	100	160,000	110	176,000
1,700	118	200,600	125	212,500
1,800	60	108,000	80	144,000
1,900	2	3,800	2	3,800
2,000	60	120,000	70	140,000
2,100	7	14,700	7	14,700
2,200	29	63,800	30	66,000
2,400	22	52,800	25	60,000
2,500	7	17,500	10	25,000
2,600	17	44,200	25	65,000
2,700	10	27,000	12	32,400
3,000	2	6,000	2	6,000
3,200	4	12,800	4	12,800
Total	16,753	13,038,700	18,662	14,878,200

By appointing clerks at the minimum salaries for first and second class post-offices the proposed appropriation will provide for the appointment of 1,509 clerks, 400 additional substations, and 4,509 promotions, of which 4,300 promotions will be made to clerks receiving salaries between $100 and $1,200 per annum.

It is recommended that an appropriation of $14,878,200 for clerk hire at first and second class post-offices be requested.

CLERKS IN POST-OFFICES.

Allowances for clerks in post-offices of the first and second classes and stations and substations connected therewith.

Year.	Estimate.	Appropriation.			Expenditure.		
		Amount.	Increase.	Per cent of increase.	Amount.	Increase.	Per cent of increase.
1892-93	$8,625,000	$8,360,000	$300,000	3.72	$8,341,643	$416,592	5.26
1893-94	8,860,000	8,810,000	450,000	5.38	8,736,011	394,368	4.73
1894-95	9,700,000	9,700,000	890,000	10.10	9,429,523	693,512	7.94
1895-96	10,100,000	10,100,000	400,000	4.12	9,963,992	534,469	5.77
1896-97	10,500,000	10,400,000	300,000	2.97	10,382,061	418,069	4.20
1897-98	11,000,000	10,600,000	200,000	1.92	10,598,329	216,268	2.08
1898-99	11,300,000	11,100,000	500,000	4.72	11,094,179	495,850	4.68
1899-1900	11,800,000	11,498,000	398,900	3.59	11,496,617	402,438	3.61
1900-1901	11,656,900	11,704,700	205,800	1.79	[1]11,723,514	226,877	1.97
1901-1902	13,300,000	13,088,700	1,384,000	11.40			
Total			4,978,700			3,798,403	
Average			497,870			422,045	

[1] Including $20,665 obtained from postmasters' salaries at post-offices consolidated with other post-offices.

PROVIDING FOR PRESIDENTIAL POST-OFFICES.

The annual adjustment of postmasters' salaries for the present year, under the act of Congress approved March 3, 1883, resulted in assigning 4,489 offices to the Presidential class. These offices, together with the stations connected with first and second class post-offices and such offices as may be advanced to the Presidential class during the present fiscal year (estimated at 250), are to be provided for out of this appropriation. As shown in the statement under the head of leases, 269 post-offices and stations are in Government buildings, and these offices should be excluded, leaving 4,223 post-offices to be provided for with rent, light, and fuel. The unusual increase for rural free delivery granted by last Congress has encroached upon the rent, fuel, and light appropriation, the effect of the rural free-delivery service being the abolishment of the smaller fourth-class offices and the enlargement of some central post-offices where such territory may be advantageously and economically served by rural-delivery carrier. Many instances may be cited where post offices under lease to this Department and amply commodious for the regular postal service required enlargement at a greatly increased rental solely on account of the establishment or extension of the rural free-delivery service. This expansion also affects the several appropriations for clerk hire, but not to the same extent, as the services of the rural carrier may sometimes be utilized. Again, owing to the failure of Congress to provide for an additional building in New York City for handling certain classes and conditions of mail, this Department was obliged to pay a rental of $42,000 out of this appropriation for two buildings for the exclusive dispatch of outgoing foreign and domestic mails.

Rent, fuel, and light for first, second, and third class post-offices.

Year.	Estimate.	Appropriation.			Expenditure.		
		Amount.	Increase.	Per cent of increase.	Amount.	Increase.	Per cent of increase.
1892–93	$1,382,000	$1,359,149	$34,849	2.63	$1,289,921.63	$69,110.31	5.66
1893–94	1,439,350	1,432,000	72,851	5.21	1,385,944.33	96,022.70	7.45
1894–95	1,505,000	1,505,000	73,000	5.10	1,442,061.36	56,117.03	4.05
1895–96	1,600,000	1,600,000	95,000	6.31	1,471,365.84	29,304.48	2.03
1896–97	1,600,000	1,600,000			1,518,625.10	47,259.26	3.21
1897–98	1,600,000	1,600,000			1,598,495.15	79,870.05	5.26
1898–99	1,750,000	1,704,000	104,000	6.80	1,695,586.73	97,091.58	6.01
1899–1900	1,750,000	1,825,000	121,000	7.10	1,817,896.33	122,309.60	7.21
1900–1901	1,950,000	1,950,000	125,000	6.85	1,944,935.71	127,039.38	6.99
1901–02	2,100,000	2,100,000	150,000	7.69			
Total			775,700			724,124.39	
Average			77,570			80,458.27	

LEASES FOR POST-OFFICES.

On June 30, 1901, there were 1,149 post-offices of the first and second classes. Of this number 241 are in Government buildings and 753 in buildings leased to the Government. Two hundred and eighty-four stations of first and second class post-offices and 104 post-offices of the third-class are in leased buildings, a total of 1,141. The annual rental of these buildings on June 30, 1901, amounted to $1,059,465.

Class.	Number of post-offices in Government buildings.	Leased premises.	
		Number.	Rental.
First class	153	53	$89,224
Stations	1	271	474,193
Second class	88	700	460,078
Stations	1	13	4,821
Third class	25	104	31,149
Fourth class	1		
Total	269	1,141	1,059,465

POSTAL STATIONS.

During the year 65 stations were established, 3 were discontinued, and 7 names were changed; 391 substations were established, 8 were discontinued and 9 were raised to stations.

Appropriation.—I recommend that an appropriation of $2,250,000 be requested to cover rent, fuel, and light for the fiscal year ending June 30, 1903.

FOR CLERK HIRE AND SEPARATING MAILS AT THIRD AND FOURTH CLASS OFFICES.

The increase of $150,000 under this item for the present fiscal year enabled this department to fairly meet the necessities of the service and an appropriation of $1,100,000 (an increase of $50,000) is requested. In this connection I would again respectfully urge Congress to make this appropriation available for general clerk hire at third-class post-

offices, i. e., at post-offices where it has been satisfactorily shown that the postmaster, by devoting his entire time to the duties of the office, can not unaided meet the public demands.

Statement of transactions in separating clerk hire during the year ended June 30, 1901.

Items.	Amount
Separating clerk hire standing June 30, 1900	$826,213
Allowances made during the year	165,826
Temporary allowances made	27,674
Allowances reduced and discontinued	61,437
Net increase during the year	104,389

TEMPORARY CLERK HIRE.

The regular clerk-hire appropriation under the present segregation not being available for temporary or emergency clerk hire at the larger post-offices, it is recommended that this appropriation cover temporary clerk hire at first and second class post-offices and be made $150,000, an increase of $25,000.

FOR SUBSTITUTES FOR CLERKS ON VACATION.

This appropriation has enabled the Department to provide substitutes for about all of the clerks in second-class post-offices during their vacations. In many of the post-offices of the first class, however, a considerable number of the clerks have either been required to render double duty during the outing period or take their vacations at an unseasonable time. With an increase of $50,000 in this appropriation it is believed that this condition may be greatly improved; hence it is recommended that an appropriation of $200,000 be requested.

FOR MISCELLANEOUS AND INCIDENTAL ITEMS.

For necessary miscellaneous and incidental items directly connected with first and second class offices, including furniture, cleaning, and all other items of expense not specifically provided for in other appropriations, $250,000.

Provided, That the Postmaster-General, in his discretion, under such regulations as he shall prescribe, may authorize any postmasters of such offices to expend the fund he may allow them for such purposes without the written consent of the Postmaster-General.

Year.	Estimate.	Appropriation.				Expenditure.			
		Amount.	Increase.	Decrease.	Per cent.	Amount.	Increase.	Decrease.	Per cent.
1892-93	$132,000	$110,000		$22,000	16.67	$107,310		$12,474	10.41
1893-94	140,000	125,000	$15,000		13.64	111,688	$4,377		4.08
1894-95	140,000	140,000	15,000		12	120,371	8,683		7.77
1895-96	150,000	150,000	10,000		6.67	111,753		8,618	7.16
1896-97	150,000	150,000				143,616	31,863		28.51
1897-98	150,000	150,000				147,923	4,307		3
1898-99	200,000	175,000	25,000		16.67	171,360	23,437		15.85
1899-1900	200,000	200,000	25,000		14.34	199,891	28,531		16.65
1900-1901	250,000	225,000	25,000		12.50	224,301	24,410		12.21
1901-2	250,000	250,000	25,000		11.11				
Net average increase			11,800				11,624		

For advertising and the purchase of newspapers containing official advertisements contracted for under this appropriation, $25,000.

CANCELING MACHINES.

There are now under rental the following machines:

	Number.	Rental.
American Postal Machine Co., Boston, Mass	461	$110
International Postal Supply Co., New York, N. Y	150	400
Barry Postal Supply Co., Oswego, N. Y	75	150
Columbia Postal Supply Co., Silvercreek, N. Y	42	150
Barr-Fyke Machine Co., Kansas City, Mo	37	150
Pneumatic Canceling Machine Co., Indianapolis, Ind	20	150

and an additional 100 Doremus automatic hand-power machines were purchased, at $225 each, for post-offices where electric current was either overexpensive or unavailable.

It is recommended that an appropriation "for rental or purchase of canceling machines and motors and power therefor" of $190,000 be requested.

Table B shows the assignment of canceling machines, with abbreviations for the names of the canceling machine companies.

ASSISTANT SUPERINTENDENTS, SALARY AND ALLOWANCE DIVISION.

The authorization made by last Congress for the employment of five field assistant superintendents of the division of salaries and allowances has thus far more than justified its wisdom, important business matters being handled more promptly and satisfactorily. On account of the large territory necessarily assigned these officials, however, much valuable time is lost in railway travel, two assistant superintendents being required to cover the entire country west of the Mississippi River.

There are 4,223 Presidential post-offices under lease or rental allowance to the Department, and upward of 9,000 where either a full or partial allowance is made for clerk hire. Heretofore this bureau has been obliged to rely altogether upon the statement of the postmaster respecting the necessity for additional clerk hire and other allowances, and although we have had the service of these field assistants but for a few months, this experience has amply demonstrated that the postmasters' estimates, as a rule, may be materially reduced without detriment to the service. It is our purpose to know the necessities of as many of the larger offices as possible before the next annual appropriations are ready for disbursement.

Two additional assistant superintendents, one each with headquarters at St. Louis, Mo., and Denver, Colo., or Helena, Mont., would make a satisfactory division of territory and radically improve the conditions.

I therefore recommend an appropriation for seven assistant superintendents, at $2,000 per annum each, with a per diem allowance of $4 each—a total of $24,220.

Recapitulation of estimates.

Items.	Present appropriation.	Average annual increase for past decade.	Estimate, 1902–1903.	Increase.
Compensation of postmasters	$20,000,000	$601,850	$20,000,000	
(Any portion thereof saved by the consolidation of post-offices under existing law shall be available for the payment of salaries of superintendents and clerks at stations established in lieu of the post-office thus discontinued.)				
Assistant postmasters	1,559,300		1,701,500	$142,200
Clerk hire	13,038,700	497,870	14,878,200	1,839,500
Rent, fuel, and light	2,100,000	77,570	2,250,000	150,000
Clerk hire and separating mails at third and fourth class post-offices	1,050,000		1,100,000	50,000
Temporary clerk hire	125,000		150,000	25,000
Substitutes for clerks on vacation	150,000		200,000	50,000
Necessary miscellaneous and incidental items connected with first and second class offices, including furniture, cleaning, and all other matters not specifically provided for in other appropriations	250,000	11,800	250,000	
Advertising and purchase of newspapers containing official advertisements contracted for under this appropriation	25,000		25,000	
For rental or purchase of canceling machines and motors and power therefor	190,000		190,000	
Special agents and per diem	17,300		24,220	6,920
Provided, That 5 per cent of the foregoing appropriations for the division of salaries and allowances of the First Assistant Postmaster-General's Office may be available interchangeably for expenditures on the objects named; but no one item of the appropriation shall thereby be increased more than 5 per cent.				
Total	38,565,300		40,768,920	2,263,620

FREE-DELIVERY SYSTEM.

The importance of the delivery and collection of the mails and the value of the free-delivery branch of the postal service to the industrial and social world are scarcely realized by the public at large, for the reason that the system has quietly grown with our institutions and seems, at least to the present generation, such a part of our daily life as to have existed always.

Essential as it has become to the rapid conduct of the vast and ever-growing volume of business of the present day, yet the system is only thirty-eight years old, having been inaugurated in 1863, under Postmaster-General Montgomery Blair, of Maryland, with 685 letter carriers, distributed among 45 of the principal cities.

It has steadily grown during each intervening year from this small beginning, until on the 1st of July, 1901, the system has been extended to 866 cities and towns—including 4 in our new insular possessions—employing an army of 16,389 uniformed carriers, who collect and carry the mails, two or more times each working day, to 32,000,000 patrons.

The total cost per annum to the Department for the maintenance of this city service is at the rate of only 50 cents for each person enjoying its convenience and facilities.

The following statement shows the operations of the free-delivery service from its establishment in 1863 to and including the fiscal year ended June 30, 1901:

Year.	Number of offices.	Increase.	Number of carriers.	Increase.	Gross receipts.	Increase.	Cost of service.	Increase.	Cost to gross receipts.	Ratio of cost per carrier.
				Per ct.		Per ct.		Per ct.	Per ct.	
1863–64	66		685				$317,063.20			$462.86
1864–65	45		757				448,661.51			592.68
1865–66	16		863				589,256.11			682.77
1866–67	47		943				699,934.34			742.24
1867–68	48		1,198				995,934.59			831.33
1868–69	48		1,246				1,183,915.31			950.17
1869–70	51		1,362				1,230,079.85			903.14
1870–71	52		1,419				1,353,923.23			954.14
1871–72	52		1,443				1,385,965.76			970.43
1872–73	52		1,498				1,422,495.48			949.59
1873–74	87	55	2,049				1,802,696.41			879.79
1874–75	87		2,105				1,880,041.99			893.51
1875–76	87		2,209				1,981,186.51			873.15
1876–77	87		2,265				1,893,619.87			836.03
1877–78	87		2,275	0.4	$12,117,820.24		1,824,166.96	[1]15.05		801.84
1878–79	88	1	2,359	3.6	13,066,470.76	7.8	1,947,706.61	6	14.90	825.69
1879–80	104	16	2,628	13.9	15,082,166.65	15.4	2,363,693.14	21.4	15.66	879.31
1880–81	109	5	2,861	6.4	16,887,086.23	11.9	2,499,911.54	5.7	13.61	873.78
1881–82	112	3	3,115	8.8	19,414,772.80	14.9	2,623,262.74	4.9	13.51	842.45
1882–83	154	42	3,680	18.1	22,317,499.94	14.9	3,173,336.51	20.9	14.21	862.31
1883–84	159	5	3,890	5.7	21,596,020.08	3.2	3,504,206.52	10.4	16.22	891.82
1884–85	178	19	4,358	12	21,940,169.42	1.6	3,935,952.55	13.4	18.15	914.62
1885–86	181	3	4,841	11	22,629,826.66	3.1	4,312,306.70	9	19.05	890.58
1886–87	189	8	5,310	9.6	25,014,385.30	10.5	4,618,692.07	6.7	18.46	869.82
1887–88	358	169	6,346	19.3	29,459,943.33	13.7	5,422,356.36	17.4	18.40	854.45
1888–89	401	43	8,257	30.1	32,206,493.72	9.3	6,957,941.90	28.3	21.60	842.67
1889–90	454	53	9,066	9.7	36,648,000.49	13.8	7,976,202.72	14.6	21.21	879.79
1890–91	519	65	10,130	11.7	40,405,386.28	10.2	9,072,160.31	13.7	22.47	895.57
1891–92	568	49	10,787	5.8	44,031,728.77	9	9,966,892.67	9.9	22.63	928.27
1892–93	610	42	11,625	8.2	48,444,363.83	10	10,683,575.26	7	22.05	919.01
1893–94	610		11,736	.9	45,801,210.16	[1]5.45	11,229,436.78	5.1	24.51	956.83
1894–95	604		12,711	8.2	49,128,621.42	7.2	12,135,544.93	8	24.70	954.50
1895–96	627	23	12,834	.94	52,567,624.42	7.7	12,713,861.41	4.7	24.18	970.59
1896–97	629	2	12,931	.75	52,741,470.87	.33	12,827,396.69	.88	24.32	991.98
1897–98	688	59	13,696	5.9	56,681,804.68	7.47	13,387,506.10	4.4	23.62	977.47
1898–99	735	47	14,256	4	61,807,916.82	9.04	13,905,800.00	3.9	22.50	975.43
1899–00	796	61	15,322	7.48	66,775,903.86	8	14,512,190.04	4.4	21.73	979.78
1900–1901	866	71	16,389	6.96	74,295,394.67	11.26	15,752,600.00	8.55	21.20	961.17

[1] Decrease.

NOTE.—Prior to the year 1877–78 the gross receipts of free-delivery offices were not reported separately by the Auditor.

NEW FREE-DELIVERY OFFICES.

During the year ended June 30, 1901, the free-delivery service was established at 68 offices, 212 carriers being appointed, whose salaries for the year amounted to $91,990.65. The offices of Mayaguez, Ponce, and San Juan, P. R., and Honolulu, Hawaii, with 13 carriers, were also brought into the free-delivery service, although all expenses at those offices were paid from the appropriation for military postal service. The following is a list of the offices established during the year, with the number of carriers at each office:

City.	State.	Carriers.	City.	State.	Carriers.
Abilene	Kansas	3	Cadillac	Michigan	3
Arlington	New Jersey	3	Charleroi	Pennsylvania	4
Bedford	Indiana	3	Charles City	Iowa	3
Baraboo	Wisconsin	3	Charlotte	Michigan	3
Beaumont	Texas	4	Chicopee	Massachusetts	4
Billings	Montana	2	Clearfield	Pennsylvania	3
Bristol	Rhode Island	3	Coffeyville	Kansas	3

City.	State.	Carriers.	City.	State.	Carriers.
Columbia	Missouri	3	Newcastle	Indiana	2
Conneaut	Ohio	4	Niles	Michigan	4
Danvers	Massachusetts	6	Niles	Ohio	3
Dedham	do	5	New Brighton	Pennsylvania	4
Durango	Colorado	3	North Vernon	Indiana	3
Elreno	Oklahoma	2	Owatonna	Minnesota	3
Enid	do	2	Perry	Oklahoma	2
Everett	Washington	4	Ponce	Porto Rico	3
Fergus Falls	Minnesota	3	Princeton	Indiana	3
Fort Collins	Colorado	3	Ravenna	Ohio	3
Galena	Kansas	4	Reading	Massachusetts	3
Gardiner	Maine	3	Rushville	Indiana	3
Greenfield	Ohio	3	Salisbury	Maryland	3
Greensburg	Indiana	3	San Juan	Porto Rico	6
Haddonfield	New Jersey	2	Sewickley	Pennsylvania	3
Hanford	California	3	Southbridge	Massachusetts	3
Harvey	Illinois	3	Thomasville	Georgia	3
Homestead	Pennsylvania	4	Three Rivers	Michigan	3
Honolulu	Hawaii	1	Valdosta	Georgia	3
Independence	Kansas	3	Warsaw	Indiana	2
Kane	Pennsylvania	3	Watsonville	California	2
Lansdowne	do	2	Webb City	Missouri	3
Latrobe	do	3	Weehawken	New Jersey	4
Mayaguez	Porto Rico	2	Wellsville	New York	3
Merrill	Wisconsin	3	Westfield	New Jersey	3
Mishawaka	Indiana	3	Westminster	Maryland	3
Morgantown	West Virginia	4	Wheaton	Illinois	3
Murphysboro	Illinois	4	Winchester	Indiana	2
Naugatuck	Connecticut	4	Waycross	Georgia	3

Two free-delivery offices were discontinued—Everett, Mass., being made a station of the Boston office, and Olneyville, R. I., being consolidated with Providence. This makes a net increase of 70 in the number of free-delivery offices, the total number in operation on June 30, 1901, being 866.

ROSTER OF FREE-DELIVERY OFFICES.

The alphabetical list of free-delivery offices, Table C, shows the number of letter carriers employed June 30, 1901, the expenditures during the fiscal year for carriers' salaries, for horse hire and car fare for carriers, and incidental expenses. The latter item embraces cost of erecting, repairing, and painting street letter and package boxes, the setting and painting of letter-box posts, and freight and cartage on both boxes and posts; bills for maps and directories used in the free-delivery service, and all other expenses incident to the service and not otherwise provided for, excepting those paid by warrant direct from the Treasury Department.

SEPARATIONS FROM THE SERVICE.

Four hundred and seventy-four letter carriers were separated from the service during the year, the causes of separation being as follows:

For intoxication	62
For arrest for violation of Postal Laws and Regulations	26
For gross violations of Postal Laws and Regulations	91
For physical disability	7
Carriers deceased	113
Carriers resigned	175
Total	474

The following comparative statement shows the percentage of separations in all grades, including deaths and resignations, for the past eight years, or since the operation of the civil-service law was extended to all free-delivery offices:

	Per cent.		Per cent.
1893–94	6.3	1897–98	2.9
1894–95	4.9	1898–99	3.0
1895–96	3.7	1899–1900	2.9
1896–97	2.5	1900–1901	2.9

Removals for cause during the same period are summarized as follows:

	Per cent.		Per cent.
1893–94	4.00	1897–98	1.32
1894–95	3.00	1898–99	1.27
1895–96	2.10	1899–1900	1.17
1896–97	1.06	1900–1901	1.09

It is an interesting fact that while the number of carriers is increasing from year to year, with the natural growth of the service, the number of removals is steadily decreasing. During the year ended June 30, 1901, of the 16,389 carriers employed at free-delivery offices but 179, or 1.09 per cent of the whole number, were removed for cause, although the percentage of separations from the service was the same as for the year 1899–1900, the proportion of deaths and resignations being greater. But 62 carriers were removed during the year for intoxication, as against 65 the previous year and 88 in the year 1898–99.

The results of the strict enforcement of rules and regulations regarding drinking and loitering are very apparent, and are particularly noticeable in some of the larger cities, where removals for cause are now of rare occurrence.

* * * * * * *

The foregoing report and statements are respectfully submitted.

WM. M. JOHNSON,
First Assistant Postmaster-General.

Hon. CH. EMORY SMITH,
Postmaster-General.

REPORT OF THE SECOND ASSISTANT POSTMASTER-GENERAL.

POST-OFFICE DEPARTMENT,
OFFICE SECOND ASSISTANT POSTMASTER-GENERAL,
Washington, D. C., October 30, 1901.

SIR: I have the honor to submit the following report of the Office of the Second Assistant Postmaster-General for the fiscal year ended June 30, 1901:

MAIL SERVICE IN GENERAL.

The mail service in operation June 30, 1901, was as follows:

Service.	Number.	Aggregate length.	Annual rate of expenditure.
		Miles	
Star routes	22,797	267,357.14	$5,204,416.86¾
Special office routes	1,666	17,794.09	32,393.15
Steamboat routes	189	33,970.90	542,985.32
Railroad routes	2,746	183,358.54	33,881,390.24
Railway post-office car routes	273	45,779.68	4,668,234.03
Railway Mail Service, officers and clerks	9,105		9,679,036.74
Mail messenger routes	7,353	5,091.16	995,811.76
Wagon routes (in cities)	234	1,271.64	737,382.91
Electric and cable car routes	326	2,956.93	362,611.17
Pneumatic-tube routes	5	8.05	222,266.00
Necessary and special facilities on trunk lines			195,682.50
Mail equipments			318,028.34
Total inland service			56,810,242.05¾
Foreign mails:			
Aggregate cost		$2,213,396.74	
Less intermediary service to foreign countries, etc		150,859.58	
			2,062,537.16
Total			58,872,779.21¾

Summary of all classes of domestic mail service in operation June 30, 1901.

Number of routes		35,316
Length of routes	miles	511,808.45
Number of miles traveled per annum		466,146,059.12
Annual rate of expenditure		$56,810,242.05¾
Rate of cost per mile of length		$110.99
Rate of cost per mile traveled	cents	12.18
Average number of trips per week		8.75

Comparison with the report of June 30, 1900, shows—

		Per cent.
Decrease in number of routes	13	or 0.03
Increase in length of routes	miles 10,818.84	or 2.15
Increase in miles traveled per annum	6,940,285.99	or 1.51
Increase in annual rate of expenditure	$1,664,182.29	or 3.01
Increase in rate of cost per mile of length	$0.92	or .83
Increase in rate of cost per mile traveled	cent .18	or 1.50
Decrease in average number of trips per week	.06	or .68

Number of contracts drawn in duplicate during the year	7,966
Proposals received during the year under general advertisement	10,700
Proposals received during the year under bulletin advertisements	6,550

MAIL SERVICE IN DETAIL.

The mail service in operation on June 30, 1901, for the several classes was as follows:

STAR SERVICE.

Number of routes		22,797
Length of routes	miles	267,357.14
Annual travel	do	134,404,541.20
Annual rate of expenditure		$5,204,416.86¾
Average number of trips per week		4.83
Rate of cost per mile traveled	cent	3.87
Rate of cost per mile of length		$19.46

Comparison with the report of June 30, 1900, shows—

		Per cent.
Decrease in number of routes		37 or 0.16
Decrease in length of routes	miles	2,500.47 or 0.92
Increase in annual travel	do	343,680.40 or 0.25
Increase in annual rate of expenditure		$71,038.46 or 1.38
Increase in average number of trips per week		.06 or 1.25
Increase in rate of cost per mile traveled	cent	.04 or 1.04
Increase in rate of cost per mile of length		$0.44 or 2.31

The appropriation for the last fiscal year was $5,240,000. The sum reported by the Auditor as expended, so far as shown by accounts stated to September 30, 1901, was $5,143,211.11, leaving an unexpended balance of $96,788.89. From this amount, however, must be deducted all accounts chargeable to this appropriation which had not been stated by the Auditor up to September 30, 1901.

Annual letting of contracts.—The contracts for the star routes in the first contract section, embracing the States of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, and West Virginia, expired June 30, 1901, and new contracts were made last year for all of the star service in those States for the term from July 1, 1901, to June 30, 1905. These new contracts covered 5,820 routes, aggregating 46,870.40 miles in length and 29,984,920.16 miles of annual travel, the latter item being an increase of 219,284.88 miles, or 0.73 of 1 per cent, over the annual travel under the old contracts.

This was the first general letting of star routes under the regulation requiring contractors to give their personal supervision to the performance of the service, and also the first general letting providing for the delivery of mail into boxes along the routes by the carriers whenever so desired by the addressee.

The annual rate of expenditure on July 1, 1901, for all the star routes in the States named, under the new contracts effective that date, was $1,579,556.02½, an increase over the annual rate on June 30, 1901, of $438,241.52½, or 38.39 per cent.

The average rate per mile traveled on June 30, 1901, under the old contracts, was 3.87 cents. The average rate per mile traveled on July 1, 1901, under the new contracts, was 5.26 cents, an increase of 1.39 cents per mile, or 35.91 per cent.

At the average rate paid under the new contracts—5.26 cents per mile—a contractor traveling 25 miles each week day would receive $1.31½ per day, or $411.60 per year.

The annual rate of expenditure for all star service was—

July 1, 1901	$5,682,366.33½
September 30, 1901	5,791,196.10

The appropriation for the current fiscal year is $5,580,000.

It is estimated that there will be a deficiency for the current year of about $290,000.

The amount estimated as necessary for the fiscal year ending June 30, 1903, is $6,715,000, being $1,135,000, or 20.34 per cent, more than the appropriation for the current fiscal year, and $845,000, or 14.39 per cent, more than the estimated expenditure for this year.

The annual rate of expenditure on July 1, 1901, $5,682,366.33¼, includes $19,578.90 for Porto Rico and $16,869 for Hawaii, this being the first time that the payment for star service in those Territories is included in the appropriations for this office.

Advertisement for proposals.—The general advertisement issued September 16, 1901, and now pending, invites proposals for carrying the mails during a term of four years from July 1, 1902, to June 30, 1906, on all the star routes in the fourth contract section, embracing the following States and Territories: Arkansas, Louisiana, Texas, Indian Territory, Oklahoma, Kansas, Nebraska, South Dakota, North Dakota, Montana, Wyoming, Colorado, New Mexico, Arizona, Utah, Idaho, Washington, Oregon, Nevada, California, Alaska, and Hawaii. The advertisement contemplates an increase of 1,943,825.92 miles, or 4.10 per cent, of annual travel.

The annual rate of expenditure September 30, 1901, for the star service in this section was $2,332,790.23.

The number of routes included in the pending advertisement is 6,193, aggregating 113,205 miles in length and 49,366,190 miles of annual travel.

Local bidders.—Under this advertisement no bid will be considered unless the bidder shall agree in his proposal that in event of the service being awarded to him he will give his personal supervision to the performance of the same and will reside on or contiguous to the route.

Box delivery on star routes.—It is contemplated that the new contracts shall make provision for delivering mail into boxes along nearly all of the routes. The terms of the advertisement on this subject are as follows:

In addition to carrying the mails to the various post-offices on the star routes covered by this advertisement, the carrier on each route (except where otherwise specifically stated) will be also required to deliver mail into all boxes and hang small bags or satchels containing mail on cranes or posts that may be erected along the route, under the following conditions:

Any person living on or near any star route herein described, and not within the corporate limits of any town or within 80 rods of any post-office, who desires his mail deposited at a given point on the line of the route by the carrier on said route may provide and erect a suitable box or crane on the roadside, located in such manner as to be reached as conveniently as practicable by the carrier without dismounting from the vehicle or horse, and such person shall file with the postmaster at the post-office to which his mail is addressed (which shall be one of the two post-offices on the route on either side of and next to the box or crane) a request in writing for the delivery of his mail to the carrier on the route for deposit at the designated point, at the risk of the addressee. The small bag or satchel above described, as well as the box or crane, must be provided by the person for whose use it is intended without expense to the Department.

It shall be the duty of the postmaster at every such post-office, upon a written order from any person living on or near the star route, to deliver to the proper mail carrier for that route any mail matter—placing in the respective satchels, where such are used, the mail for the persons to whom such satchels belong—with instructions as to the proper mail box or crane at which said mail matter shall be deposited; but registered mail shall not be so delivered unless expressly requested by the addressee in his written order. No mail matter so delivered to a carrier shall be carried past

another post-office on the route before being deposited into a mail box or hung on a crane or post.

The carrier on the star route will be required to receive from any postmaster on the route any mail matter or private mail satchel that may be intrusted to him, outside of the usual mail bag, and shall carry such mail matter or private mail satchel to and deposit it into the proper mail box or hang it on the proper mail crane placed on the line of the route for this purpose; such service by the carrier to be without charge to the addressees.

The mail carriers must be of good character and of sufficient intelligence to properly handle and deposit the mail along the routes.

The Department does not prescribe any particular design of box or satchel to be used for this service, but the person providing either should see that it is of such character as to afford ample protection to his mail. If there is a lock attached to the box, a key is not to be held by the carrier, as he is expected to deposit the mail without the necessity of unlocking the box. The box or crane should be so located on the roadside that the carrier can deposit the mail without leaving his vehicle or horse, and yet not where it will obstruct public travel.

The carrier is not required to collect mail from the boxes, but there is no objection to his doing so if it does not interfere with his making the schedule time. The law provides that every carrier of the mail shall receive any mail matter presented to him if properly prepaid by stamps, and deliver the same for mailing at the next post-office at which he arrives, but that no fees shall be allowed him therefor.

Delivery of mail by star-route carriers will not be permitted over such portions of star routes as may have in operation the rural free-delivery service, except as an additional or supplemental service when shown to be necessary and practicable.

The depositing of mail along the line of the route will not be required of carriers on steamboat routes.

The delivery of mail into boxes along the lines of star routes is an incident to the main purpose of these routes, namely, the transportation of mail in closed pouches between post-offices. The routes are not laid out with reference primarily to the delivery of mail into boxes, the carrier being expected to travel the most direct or usually traveled roads between the several post-offices on his route, but it has been demonstrated that a large number of people living on or near the lines of these routes can be given the benefit of a delivery service without any increase in the distance traveled by and with but little delay to the carier.

In connection with the general reletting in the first section last year this box-delivery feature was applied to about one-fourth of all the star routes in the country—those in the Eastern States. This year the same feature will be extended to the fourth section, including all the States and Territories (three excepted) west of the Mississippi River, thus covering, in the two sections, 12,013 routes, being more than one-half of all the star routes in the United States.

The box-delivery service is also being applied to routes in other States as the occasion arises for making new contracts.

Subcontracts restricted.—This office has discontinued the practice of granting to contractors general permission to sublet their service. It has taken the position that, having let the contracts to persons who have agreed to reside on or contiguous to the route and to give their personal supervision to the performance of the service, it will not favor a proposition to delegate the duty of personal supervision to a subcontractor unless there shall be some special and substantial reason therefor, and that the needs of the service justify the Department in expecting that, under competitive bidding limited to such persons, the full amount named in the contract shall be paid to the person actually performing or supervising the service. Therefore applicants for permission to sublet are required to state the special reasons why the service should be sublet, the name and address of the proposed sub-

contractor, and the amount of compensation to be paid him. This enables the Department to make investigation as to the suitability of the proposed subcontractor and his ability to provide the proper stock and equipment with which to perform the service.

The contracts in the Eastern States under the last general letting having been awarded to local bidders, permission to make subcontracts has been granted in but comparatively few cases, and it is to be noticed that out of the 5,820 routes there were but few failures on the part of local contractors to promptly start the service on the first day of the term, whereas in past years, under the system of awarding contracts to nonresident speculative bidders, there have been several hundred failures each year to promptly begin the service, thus necessitating the employment of temporary service by the Department pending the making of arrangements by the contractors with their subcontractors.

Star service discontinued.—The star service discontinued during the year ended June 30, 1901, by reason of the establishment of rural free-delivery service, amounted to $131,710.42.

Alaska.—The development of Alaska has made it necessary for this office to continue to give much attention to making suitable provision for the transportation of the mails in that territory. For last winter we had contract arrangements providing for carrying the mail from Skagway, via Dawson, Circle, and intermediate points, to St. Michael and to Nome, four round trips a month, instead of two, which had previously existed. Up to the present time the difficulties attending mail transportation in that section have made it impracticable to provide for transportation of other than letter mail over these routes during the winter time. Similar arrangements for four mails a month to these points have been made for the coming winter. Additional service has been provided from Seattle, via Valdez and Eagle, to Circle, one round trip a month, thus making the service between Valdez and Circle two round trips a month, with provision for carrying a limited amount of other than letter mail; also with connecting service, one round trip a month, to Chisna, where new gold discoveries are said to have been made. A contract has been made for continuing winter service by steamer along the southern coast of Alaska, between Juneau and Unalaska, one round trip a month, and for a connecting service from this steamer at Resurrection Bay to Sunrise and Hope once a month. A contract has also been made for service from St. Michael, by Bethel and Nushagak, to Katmai, three round trips, during the coming winter; also for service from Golovin to Council; also for performance of service by steamer from Ketchikan to various post-offices in that vicinity at points where considerable activity has developed.

For the past summer we had contracts for dispatching mail both from San Francisco and Seattle, via St. Michael, Nome, and points along the Yukon River, as far up as Dawson, covering all classes of mail, without limit as to weight, and we also availed ourselves of frequent dispatches by steamers from Seattle and San Francisco to Nome and St. Michael only. These cover but a part of the arrangements made.

A summary of the service in Alaska in force under arrangements to September 30, 1901, is as follows:

	Routes.	Length.	Annual travel.	Annual pay.
	Number.	*Miles.*	*Miles.*	
Star	13	8,168	198,329	$213,470.56
Steamboat	16	13,891	466,738	79,576.43
Total	29	22,059	665,067	293,046.99

Hawaii and Porto Rico.—During the last fiscal year this office completed the reorganization of the mail transportation in Hawaii on the lines followed by the mail service in the States. The cost of the service last year in both Hawaii and Porto Rico was paid out of the special appropriation provided therefor, but beginning with July 1, 1901, the service in both of these Territories was included in our general appropriations.

The following is a summary of the mail service in Hawaii as it existed July 1, 1901:

Service.	Routes.	Length.	Annual travel.	Annual pay.
	Number.	*Miles.*	*Miles.*	
Star	24	472.80	129,136.80	$16,869.00
Steamboat	11	3,643	208,520	35,160.00
Railroad	2	81.28	.....	3,474.71
Mail messenger	20	151.97	.....	5,114.00
Total	57	4,349.05	.....	60,617.71

The following is a summary of the service in Porto Rico as it existed July 1, 1901:

Service.	Routes.	Length.	Annual travel.	Annual pay.
	Number.	*Miles.*	*Miles.*	
Star	34	530.63	324,471.68	$19,578.90
Steamboat	3	4,221	112,560	46,000.00
Mail messenger	4	2.67	.....	468.00
Total	41	4,754.30	.....	66,046.90

SPECIAL OFFICE SERVICE.

The amount expended for this class of service during the year ended June 30, 1901, was $32,393.15; during the year ended June 30, 1900, $29,105.51.

The number of special offices on June 30, 1901, was 1,666, with an aggregate length of 17,794.09 miles, and an annual travel (estimated on the basis of 1.50 average trips per week) of 3,087,083.68 miles.

Comparison with the previous year shows —

	Per cent.
Decrease in number of routes	277, or 14.25
Decrease in annual travel.....miles..	315,257.60, or 9.26
Increase in length of routes.....do....	1,312.07, or 7.96
Increase in annual rate of expenditure	$3,287.64, or 11.29
Increase in rate of cost per mile traveled.....cent..	.19, or 22.35
Increase in rate of cost per mile of length	$0.06, or .3.41
Decrease in average number of trips per week	.48, or 24.24

The compensation of this class of service is limited by law (Rev. Stat., sec. 3971) to an amount not exceeding two-thirds of the salaries paid to the postmasters at the several offices supplied, the postmasters being authorized to secure such frequency of service as may be practicable for that sum.

The expenditures for this service are chargable to and included in the estimate for star service.

Special-office service is regarded as but a temporary arrangement for the supply of newly established post-offices that are not on or near the lines of existing routes, and as soon as the new office shows a number of people to be supplied or an amount of mail to be carried that will justify such action regular contract service is provided for its supply.

STEAMBOAT SERVICE.

Number of routes		189
Length of routes	miles	33,970.90
Annual travel	do	4,652,257.78
Annual rate of expenditure		$542,985.32
Average number of trips per week		1.31
Rate of cost per mile of length		$15 98
Rate of cost per mile traveled	cents	11.67

Comparison with the previous year shows—

			Per cent.
Increase in number of routes		7,	or 3.84
Increase in length of routes	miles	7,969.50,	or 30.65
Increase in annual travel	do	347,315.12,	or 8.07
Increase in annual rate of expenditure		$27,938.19,	or 5.42
Decrease in average number of trips per week		.28,	or 17.61
Decrease in rate of cost per mile of length		$3.82,	or 19.29
Decrease in rate of cost per mile traveled	cent	.29,	or 2.42

The appropriation for the last fiscal year was $545,600. The sum expended, as reported by the Auditor on accounts stated to September 30, 1901, was $508,444.48, leaving an unexpended balance of $36,555.52, out of which must be paid the accounts not adjusted at that date.

The annual rate of expenditure on July 1, 1901, under contracts made during the past fiscal year for the performance of steamboat service from July 1, 1901, to June 30, 1905, in the first contract section, was $134,427.79, an increase in the annual rate of expenditure on June 30, 1901, of $4,938.16. The service on July 1, 1901, shows an increase of two routes—180.06 miles in length of routes and 130,091.44 miles of annual travel—over June 30, 1901.

The appropriation for the current fiscal year is $586,000.

The annual rate of expenditure was—

July 1, 1901	$575,214.48
September 30, 1901	589,091.81

The annual rate of expenditure on July 1, 1901, $575,214.48, includes the sum of $35,160 for Hawaii, the payment for this service being included in the appropriations for this office from that date.

The amount estimated as necessary for the fiscal year ending June 30, 1903, is $641,000, being $55,000, or 9.38 per cent, more than the appropriation for the current fiscal year.

MAIL-MESSENGER SERVICE.

Number of routes		7,353
Length of routes	miles	5,091.16
Annual travel	do	10,541,346.76
Annual rate of expenditure		$995,811.76
Average number of trips per week		19.91
Rate of cost per mile of length		$195.59
Rate of cost per mile traveled	cents	9.44

Comparison with the previous year shows—

		Per cent.
Increase in number of routes		163 or 2.26
Increase in length of routes	miles	72.53 or 1.44
Increase in annual travel	do	397,720.60 or 3.92
Increase in annual rate of expenditure		$62,818.39 or 6.73
Increase in average number of trips per week		.48 or 2.47
Increase in rate of cost per mile of length		$9.69 or 5.21
Increase in rate of cost per mile traveled	cent	.25 or 2.72

The appropriation for the last fiscal year was $950,000, which, with the sum of $35,000 added by the deficiency act of March 3, 1901, made $985,000 available for this service. The sum expended, as per Auditor's report, was $973,471.98, leaving an unexpended balance of $11,528.02.

The annual rate of expenditure was—

July 1, 1901	$989,004.29
September 30, 1901	1,001,554.07

The annual rate of expenditure on July 1, 1901, $989,004.29, includes $468 for Porto Rico and $5,114 for Hawaii.

The appropriation for the current fiscal year is $1,038,000. The amount estimated as necessary for the fiscal year ending June 30, 1903, is $1,083,000, being $45,000, or 4.33 per cent, more than the appropriation for the current fiscal year.

PNEUMATIC-TUBE SERVICE.

The appropriation for the year ended June 30, 1901, was $225,000. The amount expended, as reported by the Auditor, was $222,254, leaving an unexpended balance of $2,746. The service was under the following routes:

Route No. 204001, Boston, North Union station, 0.74 mile, $9,000 per annum.

Route No. 207001, New York, Brooklyn, 1.65 miles, $14,000 per annum; labor, $6,200 per annum.

Route No. 207002, New York, stations P, H, D, Madison square, and F, 4.20 miles, $148,500 per annum; labor, $10,000 per annum.

Route No. 210001, Philadelphia, Bourse station, 0.52 miles, $17,600 per annum.

Route No. 210002, Philadelphia, Pennsylvania Railroad depot and Philadelphia and Reading Railroad depot, 0.94 mile, $16,966 per annum.

The contracts for these routes expired with the last fiscal year, and as Congress failed to make appropriation for the continuance of the service by pneumatic tubes, this class of service ceased with June 30, 1901. The contracting companies were notified prior to the date named that the service would be discontinued with that date, and the postmasters at the cities named were directed to discontinue the use of the

tubes for mail purposes. The Department was urged to permit the use of the tubes after the close of the year under certain conditions and in some cases the suggestions covered the operation of the tubes for mail purposes without expense to the Government. In view of the fact that Congress had failed to make appropriation for the continuance of this class of service, the Department deemed it advisable to insist on the total discontinuance of such service.

Investigation of pneumatic-tube systems.—In the act approved June 2, 1900, Congress incorporated the following paragraph:

> For the investigation by the Postmaster-General of the cost of construction, operation, and utility of all systems of pneumatic tubes for the transmission of mail, including full details and maps, and any estimates and proposals as to cost of construction, as well as the cost of stations and their operation, and all facts bearing upon the use of said tubes in connection with the mail service, to enable Congress to determine whether the service should be owned, leased, extended, or discontinued by the Government, also the cost at which the Government may acquire existing plants or necessary patents, ten thousand dollars.

Under this provision a careful and thorough investigation was made by committees composed of experienced and capable officers of the postal service and some of the most able and expert business men of the country. A comprehensive report was submitted to the Department by these committees, and this report was forwarded to Congress under date of January 4, 1901.

The appropriation for the investigation was $10,000. The amount expended under this appropriation was $5,273.76, leaving an unexpended balance of $4,726.24.

The committee of expert business men recognized the "immense advantage" of the system "to the business interests of the country" and advised "the retention of all existing plants," and recommended "extensions in a limited number of cases." Following the recommendations of this committee this office deemed it advisable to ask for an appropriation to provide for the retention of the service then in existence and the limited extension of the service on the lines and under the conditions approved by the investigating committee.

This appropriation was not made for the current fiscal year.

The Department has received many requests from the business interests affected by this service for its reestablishment. In view of the value of the system in expediting the mails in the larger cities, where its volume and importance are great, this office has renewed its request for the appropriation of $500,000 for this class of service for the next fiscal year. This is done with the understanding that the amount asked for will not cover the whole of the limited extensions recommended by the expert committee, but that it will cover all necessary expenditures during the fiscal year ending with June 30, 1903, and will provide a basis for the inauguration of the limited service recommended, which may, when fully established, involve an annual expenditure of approximately $800,000.

There are certain economies in connection with the establishment of the service only possible under an extension of lines as recommended by the Department and approved by the commission; for instance, in the city of New York, a formal proposal for continuing the service with such limited extension as has met the unqualified approval of every officer of the Department charged with the investigation of the subject and of every member of the expert commission, includes both

the old and the new service at a cost per mile of 54 per cent of the old contract rate.

It is freely conceded by all who have given careful consideration to the question that the value of the service can not be fairly estimated until there has been such reasonable extension of lines as to make possible a more economical administration than attached to the original installation of the service.

It is the opinion of the Department and of the commission that the outright purchase of the system should not be considered by Congress until a more complete test of the service has been made, as contemplated by this appropriation. An annual rental for a few years longer will probably develop improvements, encourage competition, and in every way protect the interests of the Department.

An impression prevails that the additional cost of this service in a city like New York would create an excessive expenditure for transportation of mails. This is not the case. From the foundation of the Government statistics show that more than 50 per cent of all the expenditures of the Post-Office Department has been for the transportation of mails; whereas in the city of New York, a careful estimate made a year ago placed it at 21 per cent, and this estimate included as a part of transportation of mails the cost of tube service. Under the proposed extension of tube service herein recommended the entire cost of transportation would still be below 50 per cent of the cost of handling city mail.

A criticism of the United States postal service is that it is less efficient in the collection and delivery of first-class mail in our great cities than is the postal service in the cities of London, Paris, and Berlin. It seems reasonable that so long as the Government retains the monopoly of handling first-class mail it should keep pace, at least, with private corporations in meeting the reasonable demands of the business interests of great cities. The telephone service, while expensive, is far more efficient and more widely used in the great cities of this country than in either of the foreign cities named, and the demand of our business men might reasonably be that the Government shall either place its mail service at the forefront in our great cities or relegate it, as it does the telegraph and telephone, to private corporations.

The remedy seems to be in the adoption of the pneumatic-tube service, as proposed. It is at least worth a more extended test than has yet been given it.

* * * * * * *

Our domestic postal service having been extended to Porto Rico and Hawaii, the work of the Bureau has materially increased during the past year. The changes and improvements inaugurated in connection with the star-route service have also added very considerably to the necessary detail work of the Contract Division and of the assistant superintendents of Railway Mail Service. It has been necessary for a considerable proportion of the clerks and officials, both in the Department proper and in the Railway Mail Service, to work overtime much of the year, and while they have responded cheerfully and with alacrity to every call made upon them it is due to them and to the efficiency of the service that the very conservative estimate for increased clerical force in connection with this Bureau be fully provided for by Congress.

In closing this my fifth annual report it is due to the officials of

this office more directly associated with me, and to the entire clerical force of the Bureau, to say that the longer I am permitted to be with them the more gratefully do I recognize the intelligence, efficiency, and fidelity with which they are serving the Government.

Very respectfully,

W. S. SHALLENBERGER,
Second Assistant Postmaster-General.

HON. CHARLES EMORY SMITH,
Postmaster-General.

REPORT OF THE THIRD ASSISTANT POSTMASTER-GENERAL.

POST-OFFICE DEPARTMENT,
THIRD ASSISTANT POSTMASTER-GENERAL,
Washington.

SIR: I have the honor to submit the following report for the fiscal year ending June 30, 1901. The postal subjects within the jurisdiction of this Bureau are—

First. The financial system, involving the receipt and disposal of all moneys coming directly to the Department, the collection of all moneys due the Department, the payment, by warrant or draft, of accounts chargeable against appropriations for the postal service, the designation of depositories for postal funds, and the supervision and instruction of all postmasters relative to the disposition of the postal revenue from whatever source.

Second. The supervision and collection of postal revenue through the issue of stamped paper of all kinds, the keeping of postmasters' accounts, and the redemption of spoiled or damaged stamped paper.

Third. The classification of domestic mail matter, involving the determination of the admissibility of publications to the second class of mail matter, the supervision of those therein, keeping of the necessary records in connection therewith, and the instruction of postmasters relative thereto.

Fourth. The supervision of the special-delivery system.

Fifth. The supervision of proposals and letting of contracts for furnishing the Department with postage stamps, stamped envelopes, registered-package, tag, official, and dead-letter envelopes, envelopes for the use of the several Executive Departments, and postal cards.

Sixth. The registry system, involving the supervision of the registered-mail service and the record forms used therein, the establishment and control of all registered-pouch exchanges, and the instruction of all postal officers relative thereto.

FINANCIAL STATEMENT.

The postal revenue for the year and the total actual expenditures are as follows:

Ordinary postal revenue, consisting of—		
Sales of postage stamps, stamped envelopes, newspaper wrappers, and postal cards		$102,023,473.03
Second-class postage (pound rate) paid in money		4,294,445.73
Receipts from box rents		2,915,853.14
Letter postage paid in money (made up principally of balances due from foreign administrations)		199,412.68
Miscellaneous receipts		52,172.01
Fines and penalties		30,829.30
Receipts from unclaimed dead letters		15,592.78
Total ordinary postal revenue		109,531,778.67
Receipts from money-order business		1,668,659.29
Receipts from unpaid money orders more than one year old		430,755.43
Total receipts from all sources		111,631,193.39
Expenditures:		
Actual amount of expenditures for the service of the year ending June 30, 1901 (which includes all the expenditures made on account of the year up to three months after its close)	$115,039,607.09	
Expenditures during the year on account of previous years	515,313.78	
		115,554,920.87
Excess of expenditures over receipts		3,923,727.48

The outstanding liabilities at the close of the year and the cost of transporting the mails over the subsidized Pacific railroads that have not yet settled their bonded accounts with the Government (the latter item amounting to $592,370.28) are not included in the foregoing statement.

The following comparisons with the totals of the preceding year are presented:

Total receipts for 1900	$102,354,579.29
Total receipts for 1901	111,631,193.39
Increase for 1901	9,276,614.10
Per cent of increase	9.0
Total expenditures for 1900	107,740,267.99
Total expenditures for 1901	115,554,920.87
Increase for 1901	7,814,652.88
Per cent of increase	7.2
Total deficiency for 1900	5,385,688.70
Total deficiency for 1901	3,923,727.48
Decrease of deficiency for 1901	1,461,961.22
Per cent of decrease	27.1

Detailed statements of postal receipts and expenditures by items will be found in Tables Nos. 2, 3, and 4 in this report.

LOSSES BY BURGLARY, FIRE, BAD DEBTS, AND COMPROMISES.

During the year, in cases of loss by burglary and fire, where compromises with debtors were found to be necessary, and in others where outstanding debts proved to be uncollectible, the Department suffered losses amounting altogether to $57,793.23.

AMOUNTS DRAWN FROM THE TREASURY.

The following amounts were drawn from the General Treasury within the last fiscal year on account of special and deficiency appropriations, viz:

For deficiency in the postal revenue—	
For 1898 and prior years	$1,345.17
For 1899	1,000,000.00
For 1901	4,000,000.00
Total	5,001,345.17

TRANSACTIONS AT TREASURY DEPOSITORIES.

The account during the year shows the following receipts and disbursements at Treasury depositories, viz:

Amount of outstanding warrants June 30, 1900		$265,019.57
Balance subject to draft June 30, 1900		8,222,913.43
Deposits:		
On account of postal revenue	$48,428,526.79	
On account of grants from the General Treasury	5,001,345.17	
		53,429,871.96
Total		61,652,785.39
Amount of warrants paid during the year ending June 30, 1901		52,031,268.30
Balance at depositories		9,621,517.09
ount of outstanding warrants June 30, 1901		341,389.36
Balance subject to draft June 30, 1901		9,280,127.73

Of the $53,429,871.96 deposited on account of postal revenue, $23,378.84 came through national-bank depositories. The balance remaining in national-bank depositories at the close of the year was $9,712.99.

APPROPRIATIONS, EXPENDITURES, AND ESTIMATES FOR THE POSTAL SERVICE COMING UNDER THE THIRD ASSISTANT POSTMASTER-GENERAL.

The specific appropriations for the postal service coming under the control of this office during the year (see Table No. 2) amounted to $1,160,100, and the expenditures out of these appropriations to $1,119,647.58, leaving an unexpended balance of $40,452.42. These figures do not comprehend expenditures for special-delivery business, which amounted to $542,128.01 for fees and $2,657.37 for car fare for messengers in emergency cases (a total of $544,785.38), because no specific appropriations were made therefor, the law simply authorizing these expenditures, whatever they might amount to, to be paid out of the receipts of the special-delivery system.

NOTE.—Specific appropriations have been made for the fiscal year ending June 30, 1902, providing funds for special-delivery fees and car fare for special-delivery messengers in emergent cases.

There are unexpended balances in each item of the appropriations excepting two, viz, that for the "Manufacture of postage stamps" and for "Registered-package, tag, official, and dead-letter envelopes."

The increase of expenditures for special-delivery business was as follows:

On account of fees paid for the immediate delivery of matter bearing special-delivery stamps, $64,943.04, or 13.6 per cent.

For car fare of special-delivery messengers in emergent cases, $504.17, or 23.41 per cent.

The total increase of expenditures for special-delivery business during the year was $65,447.21, or 13.6 per cent.

The estimates of appropriations for the service coming under control of this office during the coming fiscal year, ending June 30, 1903, amount to $2,155,000, which is $184,200 in excess of the appropriations for the year ending June 30, 1902. This excess is on account of the estimated increase in the cost of manufacture of stamped paper (postage stamps, special-delivery stamps, and books of stamps, stamped envelopes and newspaper wrappers, and postal cards), the estimated increase for distribution of postal cards and expenses of the postal-card agency, the cost of manufacture of registered-package, tag, official, and dead-letter envelopes, the increased indemnity for lost registered matter, and the increase in special-delivery fees. Details of these estimates will be found in statement No. 1, on page 52 of this report.

POSTAL FINANCE DIVISION.

The operations of this division during the year will appear from the following statement:

The number of accounts of contractors and other creditors of the Government on account of mail service received and examined was 185,797, requiring the recording, drawing, and mailing of the same number of warrants. The total amount covered by these warrants was $52,107,638.09; the number of drafts drawn on account of balances due present and late postmasters was 4,333, amounting to $1,584,646.53, making a total amount covered by warrants and drafts of $53,692,284.62. The number of new contracts for mail service received, examined, and entered in books kept in this division was 7,966, and the number of orders of the Postmaster-General affecting the mail service, entered in ledgers, was 36,132.

The work of this division has very materially increased during the past two years by reason of the rural free-delivery service, the rural carriers being paid by warrant monthly and the clerks in that service semimonthly, while all other mail service is paid for quarterly.

During the fiscal year ending June 30, 1900, upward of 10 per cent of the work incident to issuing warrants was on account of rural free-delivery service, while during the fiscal year ending June 30, 1901, 20 per cent of the warrants issued were on that account, an increase of 100 per cent over the preceding year.

Transcripts were received weekly from the United States Treasury and 9 subtreasuries, and monthly from 56 designated national-bank depositories, comprehending financial transactions aggregating $61,501,982.33.

Accounts were also kept with the Treasurer and assistant treasurers and with all these designated depositories.

About 22,000 circulars were sent to postmasters, containing instructions relative to the deposit of their postal balances.

The number of letters written on the subject of postal finance was 3,710, and the number of cases for investigation of the accounts of present and late postmasters made up and placed in the hands of the Fourth Assistant Postmaster-General (division of mail depredations and post-office inspectors) was 233.

FUNDS RECEIVED AT THE DEPARTMENT AND TURNED OVER TO THE POSTAL FINANCE DIVISION DURING THE YEAR.

The money received from postmasters erroneously remitting to this office balances due the Government, from collections made by the chief post-office inspector on account of defaulting postmasters and the recovery of postal remittances lost in transit, from stamp collectors and others for the purchase of stamps, stamped envelopes, etc., and from bills of exchange covering balances due by foreign postal administrations amounted to $83,752.16, the disposition of which was as follows:

Amount received	$83,752.16
Amount deposited with the Treasurer of the United States at Washington, D. C.	11,789.79
Amount deposited with the assistant treasurer of the United States at New York, N. Y	71,605.36
Amount returned to remitters	152.08
Amount used in the purchase of stamps, stamped envelopes, and postal cards which were sent to the persons ordering them	86.04
Amount turned over to the postmaster at Washington, D. C	111.68
Amount turned over to the Auditor	7.21
Total	83,752.16

DEAD-LETTER FUND.

The money taken from dead letters for which no owners could be found and that realized from the auction sale of unclaimed articles accumulated in the Dead-Letter Office aggregated $15,605.69.

This money was disposed of as follows:

Amount received	$15,605.69
Amount in current funds deposited in the Treasury at Washington, D. C.	15,148.02
Amount realized from the sale of foreign and uncurrent funds by the postmaster at New York and deposited with the assistant treasurer at New York	399.23
Total amount deposited	15,547.25
Amount of loss sustained in the sale of uncurrent funds from counterfeits and from mutilated minor coin	58.44
Total	15,605.69

DIVISION OF POSTAGE-STAMP SUPPLIES AND POSTMASTERS' ACCOUNTS.

During the fiscal year the total number of pieces of stamped paper issued to postmasters was 5,701,033,286, in value $104,739,002.49, an increase over the issue of the previous year of 379,208,412 pieces of stamped paper, or 7.12 per cent, and in value of $7,073,861.35, or 7.24 per cent. To the value of these stamp supplies should be added $46,984.23, the selling price of 4,698,423 stamp books over the value of the stamps contained therein, making the total number of pieces of stamped paper and stamp books issued by the Department 5,705,731,909, value $104,785,986.72, an increase over last year of 381,643,795 articles, or 7.16 per cent, and of $7,098,215.18, or 7.26 per cent.

In detail these issues and their comparative volume and value with those of the previous year are found in Tables Nos. 6, 7, and 8 of this report.

Statements by fiscal years of the total issues of the various kinds of stamped paper from the dates of first issues to and including the present year will be found in Tables Nos. 9, 10, and 11, pages 68, 69, and 70 of this report.

VALUE OF STAMPED ENVELOPES OVER THEIR COST.

The gross selling value of stamped envelopes and newspaper wrappers was $15,356,072.57, and their postage value was $14,399,470, leaving $956,602.57 as the cost of their manufacture and distribution. The contract cost was $570,415.37, after having deducted $6.65 for envelopes misprinted or otherwise imperfect, leaving $386,187.20 to defray the expense of distribution, in contrast with $364,363.94 for the previous year.

OTHER ISSUES.

There were issued during the year 93,931,150 unstamped envelopes for official use. Of these, 1,592,100 were registered-package envelopes No. 8, large size; 14,619,300 were No. 7, small size; 1,876,400 were No. 9 tag envelopes for registered parcels, and the remaining 75,843,350 were envelopes of the "penalty" class, used for carrying communications for the Department, postmasters, and other employees. The contract cost for these envelopes was $114,739.70.

BOOKS OF STAMPS.

The demand for postage stamps in book form has been satisfactory and has abundantly justified their issue, the total number of stamp books supplied to postmasters being 4,698,423, containing 84,435,396 2-cent stamps. The selling price of these books was $1,735,692.15, which is $46,984.23 over the face value of the stamps contained therein and $24,952.89 over the cost of manufacture. At the cost of manufacture, $22,031.34, the 4,698,423 stamp books have cost the Department $4.69 per thousand. The demand has been found to be in about the proportion of 6 of the 12-stamp size, 2 of the 24-stamp size, and 1 of the 48-stamp size. The issue of stamps in this form is of decided advantage to the Department and is a recognized convenience to the public.

THE PAN-AMERICAN ISSUE OF POSTAGE STAMPS.

The stamps of this series, comprising six denominations, 1, 2, 4, 5, 8, and 10 cent, were placed on sale at post-offices May 1, 1901, and were withdrawn from sale October 31, 1901—the dates fixed for the opening and closing of the Pan-American Exposition at Buffalo, which they were issued to commemorate. After September 30 none of these stamps were issued by the Department to postmasters, who were, by an order published in the October supplement to the 1901 Postal Guide, directed to send to this office for redemption all unsold Pan-American stamps remaining on hand November 1. Following is a statement, by denominations, of the entire number of stamps of this series supplied postmasters by the Department during the period of their issue:

1-cent	91,401,500
2-cent	209,759,700
4-cent	5,737,100
5-cent	7,201,300
8-cent	4,921,700
10-cent	5,043,700
Total	324,065,000

A description of the Pan-American stamps was given in the report of this office for the year ending June 30, 1900.

STAMPED LETTER-SHEET ENVELOPES.

The sale of letter sheets during the past year amounted to 6,344, or 231 less than the number sold during the year ending June 30, 1900. They are no longer issued to postmasters, and it is purposed to discontinue their sale within a few weeks. New Orleans is now the only post-office having letter sheets on sale, and the remaining stock at that office will be ordered in to the Department for destruction.

REQUISITIONS FILLED.

The number of requisitions filled during the past year, compared with the number filled during the year ending June 30, 1900, is as follows:

Articles.	1900.	1901.	Increase.	Decrease.	Per cent.
Stamps:					
Ordinary	206,588	205,766		822	0.03
Pan-American		11,588	11,588		100.00
Stamp books	9,355	20,568	11,213		119.86
Postage-due	18,104	18,129	25		
Envelopes:					
Ordinary stamped	87,106	86,539		567	.06
Special-request	248,441	267,617	19,176		7.71
Registered-package	64,569	62,831		1,738	2.53
Registry-tag	11,252	13,463	2,211		11.07
Penalty	52,491	56,006	3,515		6.45
Postal cards	85,025	80,118		4,907	5.77
Total	782,931	822,625	47,728	8,034	[1]5.04

[1] Net increase.

PARCELS SENT.

The number of parcels in which the foregoing supplies were packed and mailed is as follows:

Articles.	1900.	1901.	Increase.	Decrease	Per cent.
Stamps:					
Ordinary	217,629	216,933	.....	696	.03
Pan-American	.....	12,043	12,043	.....	100
Stamp books	10,143	22,245	12,102	.....	119.31
Postage-due	18,121	18,149	28	.....	.....
Envelopes:					
Ordinary stamped	124,881	127,947	3,066	.....	2.45
Special-request	182,396	209,396	27,000	.....	14.80
Registered package	63,240	61,179	.....	2,061	3.25
Registry tag	10,332	12,295	1,963	.....	18.99
Penalty	73,162	76,376	3,214	.....	4.39
Postal cards	113,079	112,799	.....	280	.24
Total	812,983	869,362	59,416	3,037	[1]6.93

[1] Net increase.

Postal cards in addition to those above mentioned were sent from the main agency at Piedmont, W. Va., to postmasters by freight to the number of 242,530,000, weighing 1,735,987 pounds—59 carloads. About 37 per cent of all postal cards issued to postmasters were so delivered direct from the main agency by freight.

The shipments by freight from the Piedmont agency to the various subagencies amounted to 416,700,000 cards, weighing 3,028,968 pounds—104 carloads. The total number of cards shipped by freight from Piedmont was 659,230,000, weighing 4,764,955 pounds—163 carloads, against 155 carloads shipped during the previous year.

In addition to the shipment of envelopes by mail, 16 shipments were made by freight from the main agency at Hartford, Conn., to five of the largest post-offices, and 9 carloads were shipped by freight to Albany and New York for distribution to various post-offices by mail. The total shipments from Hartford by freight, including those to the St. Louis subagency, amounted to 112,400,250 envelopes, weighing 1,056,750 pounds.

ISSUE OF POSTAL CARDS.

The number of postal cards issued to postmasters during the year from the agency at the place of manufacture and from the several subagencies is as follows:

Kind.	Main agency at Piedmont	Troy subagency.	Cincinnati subagency.	St. Louis subagency.	Washington subagency.	Total.
A	.....	65,500	185,500	127,500	68,500	447,000
D	1,000	2,518,750	2,168,500	2,212,750	1,942,750	8,843,750
E	46,400	244,350	242,100	400,400	118,300	1,051,550
F	.....	2,500	2,500	3,750	1,250	10,000
H	261,538,500	73,756,000	104,468,500	126,910,000	81,931,000	648,604,000
K	20,000	263,000	182,000	70,500	123,000	658,500
Total	261,605,900	76,850,100	107,249,100	129,724,900	84,184,800	659,614,800

CHANGES IN DESIGN OF POSTAL CARDS.

At this time it is not purposed to alter the sizes of any of the postal cards to be manufactured under the new contract.[1] Following is a description of the design which has been adopted for the ordinary single card in place of the present "H" 1-cent card:

In the upper right-hand corner is a portrait of the late President McKinley, three-fourths face, looking to the left, with the words, "Postage One Cent" above and "1843—McKinley—1901" below the stamp and following its elliptical contour. The portrait used for the subject of the stamp is one which was preferred by Mr. McKinley himself. The stamp is practically devoid of ornament. To the left of the portrait are three straight lines of lettering, the top line being $1\frac{1}{16}$ inches below the upper edge of the card and containing in small capital letters the words, "The space above is reserved for postmark." The second line is made up of the words "Postal card," in large plain capitals. The third line is in the same type as the first and reads, "The space below is for the address only." In the upper left-hand corner is the coat of arms of the United States, its position balancing that of the stamp in the upper right-hand corner. Above the coat of arms, in the same style of capital letter used above the stamp, are the words, "United States," and below it the words, "of America," following the contour of the coat of arms. Black ink will be used in printing this card.

An important object attained in this new card is a clear space at the left of the stamp for postmark, thus correcting the cause for complaint of the card which it succeeds—that the device frequently rendered the postmark illegible.

It has been decided to designate this card the "McKinley" card, after the subject of the stamp thereon. The practice heretofore has been to designate postal cards of the various issues by succeeding letters of the alphabet, but it is believed the name of the subject will be a much more definite and satisfactory designation and one which will be much better understood by the postal service and the public generally. It is therefore purposed to follow this method in designating postal cards of future issues.

The Department has on hand at the several distributing subagencies a considerable stock of international postal cards and of the reply and small single domestic cards. It will not be necessary, therefore, to manufacture any of these cards for some time after the new contract takes effect, and the matter of changing their designs has not yet been taken up for consideration.

REMOVAL OF POSTAL CARD DISTRIBUTING AGENCY.

The manufacture of postal cards under the new contract at Rumford Falls, Me., will necessitate the removal of the United States postal-card agency to that place from Piedmont, W. Va., after November 30, 1901.

STAMPED ENVELOPE DISTRIBUTING SUBAGENCY.

By order of the Postmaster-General, dated February 14, 1901, and numbered 218, a subagency was established at St. Louis, Mo., under the supervision of the postmaster, for the distribution of ordinary

[1] For particulars of new contract for furnishing postal cards see pages 34 and 100 of this report.

stamped envelopes to postmasters in Michigan, Indiana, Kentucky, Tennessee, Alabama, and all States and Territories west of those named. The subagency carries a stock of from 15,000,000 to 20,000,000 envelopes, which are furnished in carload lots shipped by freight from the manufactory at Hartford, Conn., and from which envelopes are distributed to postmasters by registered mail on orders drawn by this office. By this arrangement the Department is enabled to deliver envelopes to postmasters in the western section of country in two or three days' shorter time than from the main agency at Hartford, and it will eventually effect a considerable saving in the cost of mail transportation on envelopes between Hartford and the eastern limits of the territory supplied by the new subagency.

The number of envelopes shipped by freight from Hartford to the St. Louis subagency up to June 30, 1901, was 36,774,000, weighing 357,200 pounds.

From March 15 (when the subagency commenced operation) to June 30, 1901, the number of envelopes supplied to postmasters from St. Louis was 21,084,000, which is 24 per cent of the total number of ordinary stamped envelopes issued by the Department during that period, 66,470,500 having been furnished directly to postmasters from the main agency at Hartford.

It became necessary to procure large wooden cases for the shipment of stamped envelopes in bulk to St. Louis, and the envelope contractors, The Plimpton Manufacturing Company and Morgan Envelope Company, Hartford, Conn., submitted a proposal, dated March 4, 1901, to furnish these crates at the price of 65 cents each. This proposal, and the Postmaster-General's order No. 300, of March 8, 1901, accepting the same, appear in full on pages 88 and 89 of this report, marked "No. 17."

I desire to especially commend the postmaster at St. Louis, Hon. F. W. Baumhoff, for his ready and efficient support of the Department in the establishment and operation of the stamped-envelope subagency.

STAMPED PAPER FURNISHED CUBA AND THE PHILIPPINES.

Following is a statement in detail of stamped paper furnished during the year ending June 30, 1901, to Cuba and the Philippines, for which payment has been or will be made from the revenues of their respective administrations:

Denomination.	Cuba.			Philippines.		
	Ordinary stamps, special design.	Postage-due stamps, overprinted.	Stamped envelopes, special design.	Ordinary stamps, overprinted (including 2-cent stamps in books).	Postage-due stamps, overprinted.	Stamped envelopes, overprinted.
1-cent	6,000,000	100,000	1,500	1,000,000		20,000
2-cent	10,000,000	50,000	297,500	3,328,000		630,000
4-cent				500,000		20,000
5-cent	1,500,000	100,000				10,000
6-cent				250,000		
8-cent				250,000		
10-cent		10,000				
50-cent					2,000	
1-dollar				1,000		
2-dollar				1,000		
5-dollar				500		
Total	17,500,000	260,000	299,000	5,330,500	2,000	680,000

Of the overprinted 2-cent stamps furnished the department of posts of the Philippines, 804,000 were in books of 12 stamps each, 540,000 in books of 24 stamps, and 984,000 in books of 48 stamps, a total of 2,328,000 stamps, bound in 110,000 books.

Of the 299,000 special-design stamped envelopes furnished the department of posts of Cuba, 260,000 were "ordinary" and 39,000 "special request." All of the 680,000 overprinted envelopes furnished the department of posts of the Philippines were "ordinary."

No overprinted stamped paper was furnished Guam during the past year, and none will hereafter be supplied that island, as control of its postal service has been assumed by this Department.

By your orders No. 874 of July 26, 1900, and No. 395 of March 30, 1901, the overprinted postage stamps of the island possessions (the Philippines and Guam, but not Cuba), were made available for payment of postage wherever United States stamps are valid, and stamps of the United States were made good for postage in the "island possessions."

INVESTIGATION OF THE DETAILS OF MANUFACTURE AND DISTRIBUTION OF STAMPED PAPER.

It was intimated in a public way during the year covered by this report that improper or irregular methods might exist at the several agencies where the stamped paper of the Government is manufactured and distributed. To be satisfied on this point I deemed it proper to appoint a committee, which was composed of Messrs. H. A. Kelly, chief of classification division, George D. Scott, chief of redemption division, and T. A. Robbins, clerk of this Bureau, to investigate and report with regard to the details of manufacture and distribution of the stamped paper of the Government, and the methods employed by the contractors and their agents, as well as the conduct of affairs in the several agencies and subagencies under the jurisdiction of this Bureau, with a view to ascertaining whether or not it would be possible, under existing practices, to lose or misappropriate any of the Government securities in the form of stamps, stamped envelopes, and postal cards.

The committee was also required to recommend changes which might appear to be necessary to add to the safeguards in the interest of the Government at the points of manufacture.

From the report of this committee there appears to be very little and no serious cause for the assertions which were made. Such steps as may be practicable will, however, be taken in the light of the report, to throw additional safeguards around the affairs of these agencies, the committee having made several suggestions and recommendations for improvements.

REDEMPTION DIVISION.

Claims for redemption of stamped paper received from postmasters during the year, and their disposal, are as follows:

Claims presented	11,634
Claims allowed	11,272
Claims rejected	362
Value of redemptions	$348,649.07
Decrease in claims allowed over 1900	1,822
Decrease in value over 1900	$476,816.34

Increase in claims allowed during the years 1899 and 1900 was because of the redemption of newspaper and periodical, Columbian, and Omaha stamps during those years.

No letter sheets were redeemed during this fiscal year.

It is necessary to handle each case presented for redemption several times before being completed, and great care and accuracy must be exercised in the number of details that enter into this work. After completion each credit is certified to the Auditor for the Post-Office Department, the postmaster being notified of the allowance or disallowance of his claim, as the case may be.

Circulars as to proper manner of signing letters of transmittal were sent to 1,627 postmasters.

Circulars relating to redemption of stock of all kinds, were sent to 1,236 postmasters.

Circulars for public information relative to stock not redeemable from the public were sent to 1,459 firms and individuals, and permission to return stock was given to 2,235 postmasters.

CLASSIFICATION DIVISION.

The number of original cases received, briefed, and treated in this division during the year was 11,338. The larger part of these related to the classification, treatment, and collection of postage on second-class matter. The applications for entry to the second class of mail matter favorably considered numbered 4,985, an increase of 57 over the entries of the previous year. Of these, 3,322 were shown by the serial number to be in the first year of issue and are regarded as new publications, while the remainder, 1,663, were old—reentered by reason of change of name, office of publication, periods of issue, or other cause. Entry was denied 1,981—572 more than in the preceding year—many of them failing to meet the requirement of a list of bona fide subscribers approximating 50 per cent of the copies regularly issued and circulated. This rule has been uniformly enforced. The total number of applications passed upon, 6,966, deducted from the total of original cases, 13,338, leaves 4,372 which pertain to first, third, and fourth class matter other than applications for entry.

The correspondence in this division has increased from 6,744 letters last year to 13,547 this year, there having been by careful estimate 6,744 letters written last year against the exact record of 13,547 for this year; 7,809 of these letters related to second-class matter. Fifty-nine thousand one hundred and thirty-seven circular letters, many of them embodying much written matter, were sent—an increase of more than 400 per cent over the previous year. Of these circulars, 39,852 pertained to the auditing of 37,172 quarterly statements of postmasters of postage collected at the pound rate at 9,620 post-offices where such matter was mailed—an increase of 78 newspaper offices, against an increase during the previous year of 179 such offices.

PRIVATE MAILING CARDS.

The comparative use of private mailing cards and Government postal cards appears to be practically the same as it was last year. The increased interest manifested in the use of private mailing cards, which were authorized by the act of Congress of May 19, 1898, has not as yet grown to such proportions as to cause any noticeable decrease in the issue of Government postal cards.

WEIGHT OF MATTER MAILED AT POUND RATE AND POSTAGE COLLECTED THEREON.

The number of pounds of second-class matter mailed upon which postage at the cent-a-pound rate was paid was 429,444,573, creating a revenue of $4,294,445.73, an increase of 46,905,574 pounds in weight and $469,055.74 in postage collected at the pound rate, an increase of 12.26 per cent over the previous year.

From comparative statements of postage collected at the larger post-offices (Table No. 12, page 70, of this report) it appears that two offices, New York and Chicago, mail 35.88 per cent; that five offices, New York, Chicago, St. Louis, Boston, and Philadelphia, mail 50.75 per cent, and 34 offices 79.91 per cent, leaving but 20.09 per cent as the aggregate mailings of the remaining 9,586 offices.

THIRD-CLASS POSTAGE COLLECTED ON MATTER IMPROPERLY MAILED AT THE POUND RATE.

The amount of postage collected on matter of a higher class improperly mailed as second-class matter was $15,286.06, an increase over the previous year of $6,551.70, or 75 per cent.

FREE COUNTY MATTER.

The figures given below, by States, show the weight of second-class matter, in pounds, mailed free of postage within the counties of publication, as taken from the statements of postmasters for the last quarter of the fiscal year:

Free county circulation, quarter ending June 30, 1901.

	Pounds.		Pounds.
Alabama	59,029	Nebraska	170,413
Alaska	260	Nevada	3,121
Arizona	6,011	New Hampshire	61,129
Arkansas	39,340	New Jersey	101,323
California	247,419	New Mexico	6,567
Colorado	66,643	New York	735,630
Connecticut	78,738	North Carolina	60,781
Delaware	49,846	North Dakota	47,892
District of Columbia	1,474	Ohio	564,280
Florida	33,445	Oklahoma	48,712
Georgia	80,213	Oregon	59,723
Hawaii	936	Pennsylvania	733,194
Idaho	16,106	Porto Rico	none
Illinois	635,025	Rhode Island	13,888
Indiana	365,807	South Carolina	59,689
Indian Territory	29,634	South Dakota	77,485
Iowa	661,789	Tennessee	86,197
Kansas	297,215	Texas	233,364
Kentucky	113,454	Utah	17,216
Louisiana	25,324	Vermont	77,720
Maine	160,586	Virginia	59,728
Maryland	76,161	Washington	58,112
Massachusetts	98,233	West Virginia	64,608
Michigan	382,045	Wisconsin	300,436
Minnesota	231,486	Wyoming	11,298
Mississippi	91,937		
Missouri	341,222	Grand total	7,943,816
Montana	89,926		

An estimate of second-class matter passing in the mails free of postage, as provided by law, to actual subscribers residing within the county of publication has heretofore been made, based upon the count and weighing of such matter made in 1890, and fixed at 15 per cent of all second-class matter mailed. During the past year a new form of manifold receipt book has been used at nearly all post-offices, which shows the amount of free county matter mailed, and from the statements rendered in the last quarter of this fiscal year the free county matter has been drawn, which, multiplied by 4, to represent the four quarters of the year, gives a result of 31,775,264 pounds of that matter, which is 6.9 per cent of the entire amount mailed—461,219,837 pounds or 230,609.92 tons. It may be assumed that this estimate of free county circulation is less rather than more than the true amount, because of the failure of some postmasters, especially at the smaller offices, to secure the new form of manifold receipt book prior to April 1, 1901, it being the quarter in which the count of free county matter was instituted in this office. I anticipate that the record of free county mailings for the year 1902 will be almost absolutely accurate. It will be observed that these free county circulation figures are far below the estimate of the previous year—67,506,882 pounds.

The classification of mail matter is receiving very close attention, and postmasters are made to feel that their duties in connection therewith are not perfunctory and can not be slighted.

SECOND CLASS OF MAIL MATTER.

COMPARISONS.

Below will be found a statement, by years, of the weights of paid second-class matter mailed in bulk by publishers and news agents, together with the annual increase and the per cent of increase thereof, and also showing postal receipts (excluding money-order business), together with the annual increase and per cent of increase thereof, from July 1, 1890, to June 30, 1901:

Year.	Weight.	Increase in weight.	Per cent of increase in weight.	Postal receipts.	Increase in receipts.	Per cent of increase in receipts.
	Pounds.	*Pounds.*				
1891	196,942,092	22,895,328	13.15	$65,065,293.87	$5,007,416.19	8.33
1892	222,642,392	25,700,300	13.05	70,020,507.86	4,955,213.99	7.60
1893	255,634,213	32,991,821	14.32	74,982,867.77	4,962,359.91	7.08
1894	254,790,306	a 843,907	a .33	74,120,137.78	a 862,729.99	a 1.10
1895	265,314,382	10,524,076	4.13	76,171,090.09	2,050,952.31	2.76
1896	296,640,351	31,325,969	11.81	81,613,023.33	5,441,933.24	7.14
1897	310,658,155	14,017,804	4.73	81,698,281.67	85,258.34	.10
1898	336,126,338	25,468,183	8.21	87,815,985.20	6,117,703.53	7.40
1899	352,703,226	16,576,888	4.93	93,734,719.57	5,918,734.07	6.70
1900	382,538,999	29,835,773	8.45	100,899,433.44	7,164,713.87	7.60
1901	429,444,573	46,905,574	12.26	109,962,534.10	9,063,100.66	8.90

a Decrease.

Average per cent of increase of weight, 8.61.
Average per cent of increase of postal receipts, 5.68.

It will be seen from this statement, which leaves free county matter out of the calculation because it is an estimated quantity, that the per cent of increase in the weight of the second-class matter mailed each year, with but one exception, is much greater than the per cent of increase in the postal revenue.

As second-class matter, free within the county and that paid at the pound rate, forms the bulk of all mail matter, and as this matter is handled at a loss to the Government, it is very evident that the rate per cent of increase in the postal revenue is much smaller than it would have been if second-class matter were on a paying basis. It is also evident that the burden of handling second-class matter at a loss to the Government must be borne by the other revenue of the Department, which, so far as the actual postage is concerned, is derived from first, third, and fourth class matter.

Second-class matter, upon which the Government loses, has in the past eleven years—each year but two in that time (1894 and 1899)—exceeded in the per cent of increase the rate per cent of increase of the postal revenue. In 1894 the postal revenue decreased 1.1 per cent and the weight of second-class matter mailed at the pound rate decreased 0.33 per cent. In 1899 the postal revenue increased 6.7 per cent and the weight of second-class matter mailed at the pound rate increased only 4.93 per cent.

The average rate of increase in the postal revenue during these eleven years was 5.68 per cent, while the average increase in the weight of second-class matter mailed by publishers and news agents, exclusive of free county matter—that is to say, the actual weight upon which postage was paid at the pound rate—was 8.61 per cent.

It is evident, therefore, that since the mailings of second-class matter by publishers and news agents are steadily increasing at a higher rate than are the revenues of the postal service, and the revenue derived from this matter is inadequate to pay for handling the same, the other classes of mail matter must help to bear the cost imposed upon the Government by the pound rate of postage.

This showing is sufficient to demonstrate that it appears but a question of time when second-class matter may increase enough in volume to consume most, if not all, of the revenue derived from the other classes of mail matter.

ABUSES OF THE POUND RATE.

It will be noticed by referring to the figures given on page — that the weight of second-class matter mailed during the year covered by this report, both paid and free, is 461,219,837 pounds. This produced a revenue of $4,294,445.73. The proportion of weight of this paid and free second-class matter to that of all the other classes combined is estimated to be about 67 per cent. I beg you to pause and consider the importance of this statement of proportion of weights. The reflection must be astounding.

The expenditures for the maintenance of the postal service for the last fiscal year were $115,554,920.87. The gross postage revenue from all mail matter was $106,317,918.76. The astonishing fact in all this is that while the cent-a-pound rate (publisher's rate) for second-class matter, combined with its necessary equipment, constitutes approximately two-thirds of the weight of all the four classes combined, it furnishes but slightly over 4 per cent of the revenue from all postages. The loss on matter of this class must, of course, be made up from the other sources of revenue and the amount so taken from the other revenues represents the Government's loss.

A part of the loss from this nominal and unsustaining rate is lawful. Of that there should be no complaint; but a part (estimated at 50 per cent) is due to a construction of the statutes, which has permitted the admission to the second class of mail matter of a great number of alleged newspapers and periodicals which are merely pretensions. Why such were admitted to the privilege, and why they are allowed to continue to enjoy it, are the inquiries which arise, especially in the public mind. The privilege is an expensive one to the Government and should be confined to those publications which are properly entitled to it. It is my purpose to explain, in what follows, the principal abuses of the pound rate and how they exist and operate.

THE LAW.

The laws governing second-class matter are found in the following Sections quoted from the Postal Laws and Regulations:

SEC. 276. *General definition.*—Mailable matter of the second class shall embrace all newspapers and other periodical publications which are issued at stated intervals and as frequently as four times a year, and are within the conditions named in sections 12 and 14. (Act of March 3, 1879, sec. 10, 20 Stats., 359.) The sections referred to are 293 and 277. Second-class matter, above described, is of two kinds: (1) That sent by publishers or news agents; (2) that sent by others than publishers or news agents. (Sec. 302.)

SEC. 277. *Statutory characteristics.*—That the conditions upon which a publication shall be admitted to the second class are as follows:

First. It must regularly be issued at stated intervals, as frequently as four times a year, and bear a date of issue and be numbered consecutively.

Second. It must be issued from a known office of publication.

Third. It must be formed of printed paper sheets without board, cloth, leather, or other substantial binding, such as distinguish printed books for preservation from periodical publications.

Fourth. It must be originated and published for the dissemination of information of a public character, or devoted to literature, the sciences, arts, or some special industry, and having a legitimate list of subscribers: *Provided, however*, That nothing herein contained shall be so construed as to admit to the second-class rate regular publications designed primarily for advertising purposes, or for free circulation, or for circulation at nominal rates. (Act of March 3, 1879, sec. 14, 20 Stats., 359.)

SEC. 287. *Supplements admitted as second-class matter.*—That publishers of matter of the second class may, without subjecting it to extra postage, fold within their regular issues a supplement; but in all cases the added matter must be germane to the publication which it supplements; that is to say, matter supplied in order to complete that to which it is added or supplemented, but omitted from the regular issue for want of space, time, or greater convenience, which supplement must in every case be issued with the publication. (Act of March 3, 1879, sec. 16, 20 Stats., 359.)

SEC. 299. *Postage on second-class matter.*—That all publications of the second class, except as provided in section 25 of said act (of March 3, 1879, 20 Stats., 358), when sent by the publisher thereof, and from the office of publication, including sample copies, or when sent from a news agency to actual subscribers thereto, or to other news agents, shall, on and after July 1, 1885, be entitled to transmission through the mails at 1 cent a pound or fraction thereof, such postage to be prepaid as now provided by law. (Act of March 3, 1885, 23 Stats., 387.) Periodical publications are not second-class matter until "issued from a known office of publication." Such publications when sent from a printer to a publisher are third-class matter.

(NOTE.—The exception mentioned in the foregoing act is of matter entitled to free county delivery. Section 25 therein referred to is given in sections 304 and 374.)

SEC. 289. *Publications containing illegal supplements; how rated.*—Newspapers containing sheets or additional matter not legally admissible as supplements should be treated at the mailing office as third-class matter, and postage required accordingly. If the publisher desires to appeal to the Third Assistant Postmaster-General, he can do so by making a deposit for the issue mailed at the third-class rate with the postmaster, of which the excess over second-class rates will be refunded if the Depart-

ment decides the matter to be admissible as supplements. Newspapers containing illegal supplements arriving at any office of delivery without evidence of prepayment by stamps affixed should be rated up and postage collected on delivery at the first-class rate, as required by law. (See sec. 309.)

SEC. 293. *Examination at mailing office.*—That matter of the second-class may be examined at the office of mailing, and if found to contain matter which is subject to a higher rate of postage such matter shall be charged with postage at the rate to which the inclosed matter is subject: *Provided*, That nothing herein contained shall be so construed as to prohibit the insertion in periodicals of advertisements attached permanently to the same. (Act of March 3, 1879, sec. 12, 20 Stats., 359.)

SEC. 297. *Submitting false evidence punishable.*—That any person who shall submit or cause to be submitted to any postmaster or to the Post-Office Department or any officer of the postal service any false evidence relative to the character of any publication, for the purpose of securing the admission thereof at the second-class rate for transportation in the mails, shall be deemed guilty of a misdemeanor, and for every offense, upon conviction thereof, shall be punished by a fine of not less than $100 nor more than $500. (Act approved June 18, 1888.)

SEC. 302. *Rate on transient newspapers, etc.*—That the rate of postage on newspapers and periodical publications of the second class when sent by others than the publisher or news agent shall be 1 cent for each 4 ounces or fractional part thereof, and shall be fully prepaid by postage stamps affixed to said matter. (Act of June 9, 1884, 23 Stats., 40.)

This rate applies to transient newspapers and periodicals sent to any place in the United States, without regard to the place of mailing or destination.

SEC. 304. *Rates at free-delivery offices.*—*Provided*, That the rate of postage on newspapers (excepting weeklies) and periodicals not exceeding 2 ounces in weight, when the same are deposited in a letter-carrier office for delivery by its carriers, shall be uniform at 1 cent each; periodicals weighing more than 2 ounces shall be subject, when delivered by such carriers, to a postage of 2 cents each, and these rates shall be prepaid by stamps affixed. (Act of March 3, 1879, sec. 25, 20 Stats., 361.)

SEC. 308. *What is permissible to be written or printed on mail matter of the second class.*—Mailable matter of the second class shall contain no writing, print, or sign thereon or therein in addition to the original print, except as herein provided, to wit: The name and address of the person to whom the matter shall be sent, index figures of subscription book, either printed or written, the printed title of the publication and the place of its publication, the printed or written name and address without addition of advertisement of the publisher or sender, or both, and written or printed words or figures, or both, indicating the date on which the subscription to such matter will end, the correction of any typographical error, a mark, except by written or printed words, to designate a word or passage to which it is desired to call attention, the words "sample copy" when the matter is sent as such, the words "marked copy" when the matter contains a marked item or article; and publishers or news agents may inclose in their publications bills, receipts, and orders for subscriptions thereto, but the same shall be in such form as to convey no other information than the name, place of publication, subscription price of the publication to which they refer, and the subscription due thereon. (Act of January 20, 1888.) When matter mailable at second-class rates is prepaid at the third-class rate, it shall be deemed third-class matter and entitled to all the permissible printing or writing authorized for matter of the third class. The number of copies inclosed may be indicated upon the wrapper or face of the package.

SEC. 371. *When carried free.*—That publications of the second class, one copy to each actual subscriber residing in the county where the same are printed (in whole or in part) and published, shall go free through the mails; but the same shall not be delivered at letter-carrier offices or distributed by carriers unless postage is paid thereon at the rate prescribed in section 13 of this act. (Act of March 3, 1879, part of section 25, 20 Stats., 361.)

(See section 304 for the rate prescribed.)

The first thing to be understood is that in fixing this publisher's rate Congress intended to subsidize or grant a bounty to those newspapers and periodicals which conformed to the conditions prescribed for the grant. That is to say, the fixing of the postage rate at 1 cent a pound—a rate which is less than one-fifth the cost of handling—is, in effect, a subsidy. At the time of its passage the act seemed to be all that was necessary in the way of restrictions, but it was not long

on the statute books before its weakness and want of precision were apparent.

It is the duty of the Department to make such regulations as are necessary to execute the postal laws, and under the laws of second-class matter many regulations have been made; but they have not been effective in confining the privilege to those publications honestly entitled to it. Abuses have multiplied. Those who profit by them have in the past been as well able to defeat corrective regulations as corrective laws. Even now, when the magnitude of the abuses is fairly appalling, and corrective regulations are proposed, there is strenuous resistance.

HOW THE ABUSES EXIST.

The abuses of the cent-a-pound rate (publishers' rate on second-class matter) are principally known as "sample copies," "bulk subscriptions," "book serials," "house organs," "return copies to news agents," and "premiums to subscribers."

Sample copies.—The law provides that the publisher may mail at the pound rate sample copies of his publication for the bona fide purpose of inducing subscriptions or advertising patronage. Under this grant, unrestricted, many publishers, having merely a nominal list of subscribers to their publications, distribute hundreds of thousands of copies of issue after issue, ostensibly to induce subscriptions, but really to circulate advertisements, upon which heavy rates have been charged advertisers for the large circulation. In some cases special editions are made up, and extraordinary reading matter and advertising incorporated in such a degree that the publication has no semblance of its true self. The sample copy which is sent for advertising purposes may in some instances induce subscriptions, and subscriptions secured on such alleged sample copies may very properly be said to have been obtained by fraud, for the issue which follows this "special sample" is often totally unlike its precursor.

This unlimited sample-copy privilege is a means by which a private person, firm, or corporation is able to draw indirectly upon the public treasury for a share of the expense of advertising a business enterprise. The scheme is managed in various ways. The following is the most popular: A contract which jointly benefits the publisher and advertiser is entered into, and copies are distributed to a list of names furnished by the interested party; or the plan may be to circulate a given number in a certain locality where the advertisements are supposed to do the most good, the publisher selecting the names. Thus a special privilege, bestowed for a beneficent purpose upon the publisher, becomes in his hands a matter of traffic, and he confers upon the advertiser the pound rate of postage for the distribution of circular matter (advertisements), which, under lawful practices, is subject to the third-class rate.

This sample-copy privilege has also been greatly abused by the mailing of excessive numbers in the interest of the publisher. Many publications are originated which attract practically no patronage. They are experiments. While the publisher continues to believe that he may strike a responsive chord, he continues to circulate large quantities of samples. In the end, and when the fate of the adventure is settled, and the publication ceases to be issued, an investigation of the accounts would show that the Government has borne much the larger part of the expense of the experiment.

This abuse has been corrected, as will be shown later in this report.

Bulk subscriptions.—Bulk subscriptions to publications by interested parties is a popular method of circumventing the law. The requirement of the statute that before a publication is entered to the second class, and in order that the status may be maintained after entry, there shall exist a "legitimate list of subscribers," certainly means, if anything, that the subscriptions shall be of the individual variety on the merits of the publication as a news or literary journal, whatever its chosen field. It can not be sustained in reason that it was ever intended by the lawmakers that this requirement might be supplied by a few interested parties subscribing for bulk numbers to be sent to names furnished. The intent of the law is that a publication, to obtain the bounty of the second-class privilege, shall be "originated and published for the dissemination of information of a public character or devoted to literature, the sciences, arts, or some special industry," and whatever its particular field it must be on its merits and value as a news or literary journal in possession of a "legitimate list of subscribers" made up of persons who voluntarily seek it and pay for it with their own money. That is to say, as the public in general must be taxed to maintain the bounty, so the public should in a measure sanction the granting thereof through a list of subscribers.

The establishing of a rate of postage which involves a draft upon the public treasury for its maintenance was justified only on the ground that there is a reciprocal public advantage in the distribution of such matter among the people. No one questions that the distribution of genuine newspapers and periodicals is a national benefaction. It was for this that the cent-a-pound rate was created. Were the privilege properly confined to such publications there would be no complaint; but when the admission or continuance of a publication in the second class depends upon the existence of a "legitimate list of subscribers," and that list is made up wholly or largely of persons whose names have been furnished, directly or indirectly, by those interested in a commercial way in the circulation thereof, can that be said to be a "legitimate" list as contemplated by the statute? Certainly not.

It is a prima facie case that a publication is an advertising sheet, and is within the contemplation of the law herein quoted as "primarily designed for advertising purposes," when it is of such a character as to be maintained by a bulk subscription patronage. Of course there can be no interference with the right of one citizen to subscribe for another when done with no commercial purpose and when the subscriptions so given are within reasonable limits.

There have been many cases lately before the Department where it has been pleaded and shown that the publications to which bulk subscriptions have been made were meritorious and the circulation thereof of educational benefit. Admitting this as true, it does not justify the admission of a publication to the second class on such an alleged compliance with the law. The Department can not say that this or that is a good or a bad publication, and that in the instance where it is judged to be good the "legitimate list of subscribers" may be supplied by a few interested parties, and that in another, where it is not good, individual subscriptions must compose the list. The whole purpose of the law is defeated in the permission of bulk subscriptions. If it be allowed, private persons may advertise at the public expense by inserting their circulars (advertisements) in alleged newspapers and magazines.

This abuse has also been corrected, as will be shown later in this report.

Book serials and libraries.—The abuse of the law, through the admission to the pound rate of books disguised as periodicals, has long been the subject of discussion in the reports of this Department. Such books have no semblance of right to the second-class privilege. The law was intended for genuine periodical publications—that is to say, publications which from their very nature and purpose would be of value to their constituency (a "legitimate list of subscribers") when issued at stated intervals, serving to their readers at such periods news, writings, etc., on the subjects to which they are devoted. A book issued once a month as a number of a so-called "series" or "library" is not a periodical within the meaning of the law. It is a monstrous parody to so construe the statute. No book, however bound, can have the periodical character contemplated by law. It is not material to the reader whether books come to him at stated intervals or all at once; the periodical issue and receipt of them has not the least significance. Their issue at regular periods is merely a subterfuge that enables the publisher to deprive the Treasury of its just revenue through an administrative reasoning for which I can find no satisfactory accounting. Genuine periodical issue, as contemplated by law, is properly exemplified in the daily and weekly newspapers and the great monthly magazines. There is sound reason in their issue at regular stated periods. In their case periodicity is the source of life and the circumstance of their maintenance. A book can have no such character and can have no rightful claim to the second-class privilege.

It is shown later in this report that this abuse has been corrected by regulation.

The house organ.—The house organ is a publication which is intended to promote directly or indirectly the other business of the publisher. It may be issued by the firm or person whose other business it is intended to advance or by another acting for the real publisher. Its purpose is the same in either case. It gives immense advantage over a competitor whose business, or circumstances, or conscience will not permit of his creating a draft upon the Treasury like his rival. Often such periodicals are of a very meritorious character. It is a matter of business sagacity to make them attractive and readable. Besides this, the maintenance of a high character helps greatly in the matter of disguise to the public and to the Department, which latter must depend upon its field agents, postmasters, and others to detect them.

The house organ is one of the most difficult of all the abuses to locate. The disguise is often so perfect as to pass the closest scrutiny. Sometimes the business is cleverly managed by a manipulation of issues—one will be sent forth which is clearly entitled to pass as second-class matter; the next will exhibit more plainly its true character as an advertising sheet, and so on.

This advertising sheet very generally gains and maintains life as second-class matter through the sufferance of the Department that a "legitimate list of subscribers" (the prime essential of the law) may be gained by offering premiums to subscribers or by bulk subscriptions. An advertising sheet, however meritorious, seldom is able to gain the patronage of subscribers on independent merit, and premiums and other considerations must be used as an inducement. The extrin-

sic consideration varies in character—it may be books, merchandise, a chance to win a prize, a life-insurance policy, or even a town lot—anything to gain the alleged subscriber. Such publications have no rightful place in the second class, even though every copy of every issue be consumed by legitimate subscribers, as advertising sheets are specifically excluded by the terms of the law in the following proviso: "Provided, however, that nothing herein contained shall be so construed as to admit to the second-class rate regular publications designed primarily for advertising purposes."

There is still another phase of this class of publications. It is the personal organ, which is designed to be the vehicle for the personal views of the publisher. It has come to be considered that no matter what the nature of the contents, if the publication be issued at stated intervals the Government will foster it with a subsidy.

The Department has not in the past been vigilant in denying original entry to publications of this character or in discovering those which, after entry, merge into this category.

Every effort is being made to curtail this abuse.

Return of unsold copies to news agents.—It is difficult to understand how the construction of the law originated and has existed which allows this privilege to news agents. By the strangest of reasoning, a privilege which is denied the publisher himself is conferred on one who may act as his agent. If we stop to consider the first principles of the law of second-class matter, the fallacy of this must be at once apparent.

It was designed that this subsidy or bounty—whichever is the most appropriate term—should be bestowed upon those publications which, having complied with all other requirements, should be in possession of a "legitimate list of subscribers." That is to say, that the Government is not willing to grant the privilege of this postage rate to a publication for which there was no genuine public demand expressed through a subscription list. The law is in wholesome consonance with the principles on which our Government is founded; it is of, for, and by the people, and it did not intend that the people should be taxed for any part of the cost of distributing a publication until they themselves have given approval through a list of subscribers.

The news agency is a recognized means of reaching the public, and the law wisely provides that to such publications as the public shall subscribe for, to or through a news agent, the pound-rate privilege shall be extended. Logically, to do the greatest good, the same principle should be carried further, and so it is provided that one news agent may send to another, for the purpose of sale, all such publications as may be in public demand. The law itself does not contain the words "for the purpose of sale;" but who, except those interested in a contrary construction, would contend that those words are not there by the plainest and fairest implication? It is scarcely short of monstrous to claim that Congress intended to tax the people for the cost of transporting back to a central news agent copies of a publication which the public refused to purchase, and which may be distributed to the sales counters of news agents in numbers a hundred times in excess of the demand, the excessive distribution being merely for the profit which would come to the publishers through the lucrative advertising patronage gained by a claim of large circulation. The law denies the publisher the right to have unsold copies returned to him at the pound rate. What an absurdity it is, then, to claim that by dealing through a

central news agency located in the city of publication he may, after all, cause the people to be charged with the expense of returning his dead matter to the pulp mill!

It is represented that these news agencies, which have gained the return privilege through false construction of the law, have made a handsome profit on the business of giving to publishers the privilege which the law itself refuses them. In the sharp competition of an overloaded publishing business publishers of a certain character of periodicals are completely at the mercy of the news agencies, for without the return privilege they can not compete. Thus it has come to be the established practice for news agencies not to purchase copies outright which they expect to sell, as was contemplated by law, but to take part and even entire editions on trial. If all copies be sold, it is well; but if not, the news agency loses nothing, for the unsold number is returned to the publisher. Of course, to circumvent the law, the packages are addressed to the news agencies. Thus through the connivance of a central news agent a publisher can defy the law which refuses him the privilege of the pound rate for return copies if the packages be addressed to him, for whom they are really intended.

To change this practice by law or by regulation will be to defend the public purse from unwarranted drafts, but it will amount to a revolution to some publishers and news agencies. Be it understood, however, that a revolution is often justified.

This manifest abuse of the pound-rate privilege has been corrected, as will be shown later in this report.

Premiums to subscribers.—This is the king of abuses. By means of it others thrive. All demand correction, but none so much as this. Not one has attracted so little attention; yet it is the most flagrant, the most vicious. It nullifies the vital principles of the law, it destroys every safeguard, it is the means of defeat of the Department regulations at every point, and through it the public Treasury is open to the unscrupulous.

The law of second-class matter was designed to encourage the dissemination of information of a public character among the people. The rate of 1 cent a pound, less than one-fifth the cost of handling, is justified on the ground of reciprocal public benefit in the enlightening influences of the press. It is wisely provided in the act itself that there shall be tangible evidence that the public appreciates this or that publication to the degree that there must exist in each instance, before the rate is granted, a "legitimate list of subscribers."

It is not provided in the law that there shall be any interference with the price at which a publication is sold, further than to prohibit free circulation or circulation at a nominal rate. In other words, it is prohibited that a publication be sent free to subscribers or that the subscription price be nominal. If this wise provision means anything, it is that, whatever the field to which a publication is devoted, it must obtain subscriptions on its value or merit as a news or literary journal in that field. The copies sent in fulfillment of such subscriptions are clearly within the intent and purpose of the law and are entitled to be forwarded in the mails at the pound rate.

The law is liberal to the publisher of a bona fide periodical which is in the possession of such a list of subscribers. It provides that he may send sample copies at the same rate for the purpose of inducing new subscriptions; but to send to subscribers and to send sample copies are his only privileges at that rate. For the carriage of no

other copies does the law intend that the people should be taxed. But under lax and faulty interpretations and loose administration the publisher has driven a coach and four through the law. The permission to give premiums to induce subscriptions is the means and destroys the very foundation of the structure.

The privileges can not be confined to proper limits until it is provided that when a publisher has fixed the price of subscription to his publication he may not discount that price by any other consideration to the subscriber than the publication itself. But this discounting is now done, and has been suffered by the Department for years. Of course, if one publisher may induce a subscription by a premium process, another must be allowed to do the same. If the one subscription be legitimate the other must likewise be legitimate. No line can be drawn between publishers or publications. The rule that applies to one must apply to all. A censorship could not endure. So long, therefore, as a publication which can not obtain the subscription on its independent merit at the price fixed is allowed to secure that subscription by means of another and a different consideration to the subscriber, so long will the purpose of the law be defeated.

This premium business assumes many phases. Some of them have the appearance of eminent respectability. In one instance some article of merchandise is given as the inducement; in another, it may be a chance to win a large sum of money, or perhaps a fortune, in a guessing contest; in another, the premium proposition is concealed in a combination with some other article which is offered for less than its regular market value if the two are purchased together, or the periodical is itself given as a premium for the purchase of the other article. The purpose of all is the same; it is to secure subscriptions which on the bare merit of or the desire for the publication would or might not be made. Whether the publication be regarded as good or bad is not a question. Such inducement to subscription violates the law.

The whole purpose of the statute is to grant the pound rate only to those periodicals which command subscribers on their own merit. If a person will not pay the subscription price for the periodical alone, then it is certain he does not want it. Why should the people at large be taxed four-fifths of the cost of transporting it to him when he is forced to accept it either through its combination with another article which he wishes to purchase, or when he wants to take part in a guessing contest and finds that a condition precedent is that of being a subscriber to the publication, or when some desired article of merchandise is so combined with it that the periodical appears to be free of cost? This practice is responsible for the great overloading of the mails with pretended newspapers and magazines and other periodicals.

No publication has a just claim to be transported at the public expense until it is subscribed for on its independent merit at the price fixed by the publisher. Why, except for deception or to sell the merchandise or to inflate a subscription list, should a subscription price be fixed at $2 per year when an article of merchandise valued at $2 is to be given for no increase of price? Should not the price of the publication be fixed honestly, so as to make it certain that there shall be no tax upon the people for the distribution of a publication which is not sought for its own sake?

Alleged subscription lists of fabulous proportions are worked up by this premium process for periodicals which on their naked merit could scarcely command a single subscription; yet the Government subsi-

dizes them and the people are taxed for nearly the whole cost of their transportation, while the publisher grows rich on the high advertising rates he is able to command on his claim of a big subscription list, with perhaps not one actual reader to a hundred copies.

So long as the premium-induced subscriber is allowed as "legitimate" so long will the pound-rate privilege be abused. Stop this by law or by regulation and all publications, like water, will reach their level. The people may be depended upon to subscribe for a periodical that is wanted, and for the transportation of no other should the Government pay any portion of the cost. With the stoppage of this abuse others will cease. It is the key to many, especially the so-called "fakes."

The foregoing is a recitation of the principal abuses of the second-class rate and how they exist and operate. The permission of law to supplement a publication is also abused in a minor way, as is also the provision for the insertion of advertisements in periodicals. The first of these deprives the Department of its just revenues on third-class matter by the adoption of illegal supplements, and the second from its revenues on fourth-class matter by the insertion of alleged advertisements which are in fact samples of merchandise. By proper rulings and vigilance on the part of postal officers both of these abuses are being corrected.

ABUSES CORRECTED BY RULINGS.

In my last annual report I stated that the sample-copy abuse no longer existed. This is still true, unless the restrictions placed upon that privilege by this office are not regarded as sufficiently limiting it. The ruling is that a publisher may send 100 per cent of sample copies on his "legitimate list of subscribers," or 50 per cent of the regular issue. It is doubtful if a further limitation, which has of late been advocated, would be justified under the law. The ruling is based on the language of the act, which is as follows:

Provided, however, That nothing herein contained shall be so construed as to admit to the second-class rate regular publications designed primarily * * * for free circulation. * * *

It is held that a publication, or any issue thereof, is primarily designed for free circulation when more than 50 per cent of the copies are to be distributed gratuitously. This restriction is fairly within the law, and it is reasonable. It has been enforced for nearly two years.

In my last report I also stated that the evil of bulk subscriptions had been suppressed and was no longer allowed. This office continues to rule against such subscriptions.

* * * * * * *

CONCLUSION.

In conclusion, I wish to commend the officers, clerks, and others of this Bureau who have contributed to the results accomplished during the year covered by this report in the close attention given to, and the painstaking discharge of, their official duties.

Very respectfully,

EDWIN C. MADDEN,
Third Assistant Postmaster-General.

Hon. CHARLES EMORY SMITH,
Postmaster-General.

REPORT OF THE FOURTH ASSISTANT POSTMASTER-GENERAL.

POST-OFFICE DEPARTMENT,
OFFICE FOURTH ASSISTANT POSTMASTER-GENERAL,
Washington, D. C., November 13, 1901.

SIR: I have the honor to invite your attention to the following statement of the operations of this Bureau for the fiscal year ended June 30, 1901:

The work of the Bureau has increased proportionately with the enormous increase in the postal business of the country. Additional help is needed in the various divisions, especially that of post-office inspectors and mail depredations. While in the division of appointments the number of appointments was not so great as during the years 1897 and 1898, yet the work of the division is voluminous and exacting. The work of the division of bonds and commissions is up to date, a condition which has not existed heretofore for many years; and the enormous amount of work devolving upon the inspectors' division because of the vast increase in the postal business of the country can be appreciated only by those intimately acquainted with the detail work which is daily referred to that division for prompt attention.

THE DIVISION OF APPOINTMENTS.

To the division of appointments are referred all papers relating to the appointment of postmasters, to be briefed, jacketed, and filed for the consideration of the Fourth Assistant Postmaster-General, the Postmaster-General, and the President.

The work of this division relates to the appointment of postmasters, establishment and discontinuance of post-offices, deaths and resignations of postmasters, changes in post-office names and sites, and complaints and charges against postmasters.

APPOINTMENT OF POSTMASTERS.

There were more appointments of postmasters during the last fiscal year than during the preceding year. The total number of appointments for the year ended June 30, 1900, was 15,142, while for the year ended June 30, 1901, they amounted to 15,657. This increase was caused by the increase in the number of resignations of postmasters, which necessitated the appointment of successors. During the year special attention was given to the discipline of postmasters for irregularities, which resulted in a slight increase in the number of removals for cause. The service rendered by postmasters, especially of the fourth class, has gradually improved, and has never been more efficient in the history of the Department than it was during the fiscal year 1901.

For convenience the division is divided into sections of two or more States, with a clerk in charge of each section. These section clerks are under the supervision of the chief of the division. Books of record are kept, showing, by States, the names of post-offices, alphabetically arranged, and the names of postmasters and the dates of their appointment and dates upon which they are commissioned. These records also show the names of all the postmasters who have served at a given place for several years past.

A journal is kept by the chief of the division, containing the daily record of all changes in postmasters, changes in the names of post-offices, showing the county and State in which the post-office is located, the name of the retiring postmaster, the name of the appointee, and the reason for the change; also a record of the establishment and discontinuance of post-offices. A condensed weekly report is made from this daily journal.

In the preparation of papers in the appointment division, post-offices are divided into two general classes—Presidential and fourth class.

A Presidential office is an office where the salary of the postmaster amounts to not less than $250 per quarter for four consecutive quarters, and the gross receipts for the same time amount to $1,900. When an office has paid the above amount for four consecutive quarters, and the gross receipts have amounted to $1,900 or more, it is then advanced to the Presidential class.

Presidential offices are divided into three classes—first, second, and third. A first-class office is one in which the gross receipts are over $40,000 per annum, the salary of the postmaster of the same being from $3,000 to $6,000. A second-class office is one where the gross receipts amount to $8,000 and not exceeding $40,000 per annum, the salary of the postmasters of this class being from $2,000 to $2,900 per annum. A third-class office is one where the gross receipts are $1,900 and not exceeding $8,000 per annum, the salary of the postmaster being from $1,000 to $1,900 per annum.

Fourth-class offices comprise all offices where the receipts are less than $1,900 per annum, or where the compensation of the postmaster does not amount to $250 per quarter for four consecutive quarters. Fourth-class offices are divided into two kinds—money-order and nonmoney-order. A money-order office is one where money orders are sold in all sums not exceeding $100.

Presidential postmasters are appointed by the President and confirmed by the Senate. Papers in all Presidential cases are prepared in the appointment division and submitted to the Fourth Assistant Postmaster-General, and by him to the Postmaster-General, who in turn submits them to the President with whatever recommendation he may have to make. When the Senate is in session, the President sends the names of Presidential postmasters to the Senate for consideration. When these nominations by the President are confirmed by the Senate, notice of appointment is mailed from the bond division to the appointees. After the bond of the newly appointed postmaster is filed and approved a commission is issued. The commission dates from the date of confirmation, and is for a term of four years. When the Senate is not in session, a vacation appointment may be made. In vacation appointments cases are prepared for the consideration of the Postmaster-General and the President in the same way as above stated. The President signs the appointment of the postmaster, notice and blank bond are immediately forwarded him, and upon the approval of the bond he is commissioned, which commission holds until the adjournment of the first session of the Senate following his appointment, or until his successor is nominated and confirmed by the Senate, unless said commission be sooner revoked by the President.

When the Senate meets, the President nominates postmasters for all vacancies that have occurred during the recess of the Senate. He may nominate the postmaster appointed in vacation, or some other candidate, if he prefers. Upon the confirmation of any postmaster by the

Senate the commission of the postmaster appointed for the vacation terminates, and upon the filing of a bond the postmaster is commissioned for a term of four years from the date of his confirmation.

Fourth-class postmasters are appointed by the Postmaster-General. This class of cases is prepared in the appointment division and submitted by the chief of the division to the Fourth Assistant Postmaster-General, who initials the jackets authorizing the appointment of postmasters. Notice of appointment and blank bond are sent out by the bond division to the appointee, and upon the approval of his bond a commission is issued, signed by the Postmaster-General, dating from the date upon which the commission is issued.

ESTABLISHMENT OF POST-OFFICES.

It is the policy of this Bureau to establish a post-office wherever it is desired, if it is shown that it will accommodate a reasonable number of people, the purpose being to give the people the most convenient mail facilities possible. It is believed that such a policy contributes to popular intelligence and good citizenship. When a substantial request is made for a new post-office, blanks covering the necessary inquiries are forwarded. When returned, favorable or adverse action is taken, as the good of the service may direct. The petitioners are always advised of the decision of the Department and reasons therefor.

The record of establishments during the last five fiscal years is as follows: 1897, 1,601; 1898, 3,601; 1899, 2,935; 1900, 3,600; 1901, 3,294.

DISCONTINUANCE OF POST-OFFICES.

In case a post-office ceases to be a public necessity, or it is impossible to secure a suitable postmaster, it is discontinued; but before discontinuance a public notice is posted upon the door of the post-office for fifteen days, stating that upon a certain day the office will be discontinued. If in the meantime, however, the people petition for its continuance, and present a suitable candidate for postmaster, the office is continued and the person whose name they present for postmaster is appointed.

There have been 1,125 more post-offices discontinued during the last fiscal year than during the preceding fiscal year. The principal causes for the large increase in the number of post-offices discontinued have been the extension of the rural free delivery service and the establishment of rural free delivery stations in lieu of fourth-class post-offices, the extension of city delivery service so as to include offices adjacent to large Presidential offices, and the improvement of the public highways. The extension of rural free delivery has resulted in the discontinuance of 1,226 post-offices during the year, the salaries of postmasters at said offices aggregating $79,336.

PRIVATE POST-OFFICES.

Increased diligence has been exercised in the suppression of private post-offices. Wherever it is found that a post office is conducted for the sole benefit of some corporation, factory, nursery company, patent-medicine firm, or other private business institution it is discontinued. Such company or corporation usually has some one connected with the institution appointed postmaster, and the firm receives the benefit of the cancellations, or the salary and allowances of the postmaster. To permit such post-offices to exist not only greatly reduces the revenues

of the Department, but may be fruitful of fraud, and is, in the judgment of this Bureau, very much against public policy. In some instances these corporations or business institutions derived thousands of dollars of revenue from the Government, which virtually amounted to a commission or discount on their postal business.

Many such offices have been discontinued during the year and the establishment of others refused.

DEATHS AND RESIGNATIONS OF POSTMASTERS.

Upon receiving notice of the death of a postmaster, a record of the same is made and the division of bonds and commissions is notified, which division then notifies the sureties that they are required to take possession of the office and appoint an acting postmaster, to serve until a successor to the deceased postmaster may be appointed. When the resignation of a postmaster is received it is filed, and steps are at once taken to secure a successor. During the year there were 48 resignations of Presidential postmasters and 53 deaths, an increase of 1 in the number of resignations and 8 in the number of deaths over the preceding fiscal year. There were 895 deaths of fourth-class postmasters and 8,791 resignations, a decrease of 24 in the number of deaths and an increase of 778 in the number of resignations, as compared with the preceding fiscal year. The material prosperity of the country has doubtless contributed to the large increase in the number of resignations of postmasters. Men have found it more profitable to devote their time to private enterprise than to the public service, especially in the smaller offices.

CHANGES IN NAMES AND SITES.

In the naming of post-offices it is the policy of the Bureau to give plain, simple names, of a single word. This rule, however, is frequently interfered with by local conditions. A sentiment emanating from some historical incident, or business interests of the locality, may create in the minds of the people a desire for a special name that does not conform to the rule, and in deference to this sentiment or interest the Bureau often finds it necessary to make exceptions to the rule.

In the changing of the sites of fourth-class post-offices the greatest convenience to the largest number of patrons is considered. In many cases bitter controversies arise over the location of a post-office, and it is found necessary to detail an inspector to make an investigation of the matter in person.

COMPLAINTS AGAINST POSTMASTERS.

The number of complaints against postmasters has been about the same during the fiscal year as in former years. Whenever it appears from their nature that they are worthy of consideration careful attention is given the same, and if the gravity of the case warrants it is referred to an inspector for investigation. Whenever it appears that a postmaster has violated the postal laws and regulations, and the offense does not seem of sufficient gravity to warrant his removal from office, an official reprimand is forwarded to the postmaster, a copy of which is filed with the division of appointments against his record.

The following tables and explanatory notes in connection therewith

give a comprehensive idea of the work done in the appointment division for the fiscal year:

OPERATIONS OF THE APPOINTMENT DIVISION.

Post-offices established, discontinued, advanced to Presidential grade, relegated to fourth class, total number of offices, etc.

	June 30—			
	1900.	1901.	Increase.	Decrease.
Post-offices established	3,600	3,294		306
Post-offices discontinued	1,912	3,037	1,125	
Fourth-class offices advanced to Presidential	269	257		12
Presidential offices relegated to fourth class	15	11		4
Number of Presidential offices	4,233	4,466	233	
Number of fourth-class offices	72,455	72,479	24	
Total number of offices	76,688	76,945	257	
APPOINTMENTS DURING THE YEAR.				
Presidential offices:				
On resignations	47	48	1	
On deaths	45	53	8	
On expiration of terms	288	184		104
On removals	56	49		7
On offices becoming Presidential	271	255		16
Total number of Presidential appointments during the year	707	589	9	127
Fourth-class offices:				
On resignations	8,013	8,791	778	
On deaths	919	895		24
On removals at expiration of four years' service	1,263	1,394	131	
On removals	628	687	59	
On offices relegated from Presidential to fourth class	14	11		3
On establishments	3,598	3,290		308
Total number of fourth-class appointments	14,435	15,068	968	335
Total number of appointments	15,142	15,657		

ESTABLISHMENTS, DISCONTINUANCES, AND CHANGES OF NAMES AND SITES.

Total number of post-offices established during the year	3,294
Total number of post-offices discontinued during the year	3,037
Total number of names and sites changed	2,794

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DIVISION OF POST-OFFICE INSPECTORS AND MAIL DEPREDATIONS.

The division of post-office inspectors and mail depredations consists of post-office inspectors, under the charge of the chief post-office inspector, and the division of mail depredations, under charge of a chief clerk, where the records of all depredations upon the mails are kept.

During the fiscal year a larger number of post-office inspectors was employed than during any other year in the history of the postal service. Numerous irregularities were discovered in remote country post-offices, which our inspectors have been unable to reach in former years. In some instances frauds were detected and large amounts of money collected from dishonest officials, which would not have been discovered had it not been for the unusual vigilance required of the inspectors' force during the year. Certain kinds of crime against the postal laws seem to be on the increase, such as the burglarizing of post-offices and the robbery of mail boxes. While a greater number of arrests have been made and more convictions had of such offenders against the law during the past year than during the preceding year, yet we have not had a sufficient number of inspectors to cope with the persistent industry of this class of criminals. The Department has

therefore asked Congress to make a larger appropriation for the next fiscal year for this branch of the service.

The general direction of the force of inspectors and the supervision of all matters pertaining to this branch of the service is vested in the chief inspector, with headquarters at the Department. For convenience and efficiency, the territory of the United States has been apportioned into fifteen divisions, each having an inspector in charge, who has the general direction of all matters referred to him and of the inspectors assigned to his division. The results of field investigations and the correspondence from the inspectors are transmitted to the Department through the several inspectors in charge.

The duties performed by post-office inspectors embrace a wide scope and are of great importance to the welfare and integrity of the postal service. They are charged with all investigations in relation to complaints against postmasters and other employees of the postal service, allowances for clerk hire and other expenses for post-offices, the collection of balances due the United States by delinquent and retiring postmasters, and establishment or discontinuance of post-offices, postal stations, money-order offices, and free-delivery service; determining the responsibility of sureties on the official bonds of postmasters at money-order offices, the inspection of the accounts and the management of post-offices, the instruction of postmasters and other employees in the regulations and usages of the service, investigations pertaining to the burning of post-offices, losses of mail locks and keys; the location, change of name or site of post-offices; the wrong payment of money orders, and many cases relating to detentions, losses, and irregularities in the registered and ordinary mails, and other violations of the postal laws, as well as special investigations, which may be assigned them by the Postmaster-General and the Fourth Assistant Postmaster-General.

During the year 178,514 cases have been referred to the inspectors' division for investigation. The entire number investigated was 179,084, but there were left over from the fiscal year 1900 87,897 cases, so that we had on hand on July 1, 1901, 87,327 cases.

The division of mail depredations, under the direction of a chief clerk, is located in the Department, and is charged with the records, accounts, and correspondence pertaining to this arm of the service. In order that a complete record may be kept every complaint or inquiry received at this office is jacketed, briefed, and numbered, and for the sake of convenience these complaints and inquiries are divided into classes, as follows:

A.—Complaints relating to the registered mail.

B.—Complaints relating to the ordinary mail, or that which is not registered.

C.—Miscellaneous complaints and inquiries affecting the business or employees of the postal service and violations of the postal laws.

D.—Matters pertaining to highway robberies of the mails, robberies of post-offices, and other special depredations.

F.—Complaints and inquiries affecting mail matter dispatched to and received from foreign countries.

R.—Matters pertaining to claims for reward for the arrest and conviction of persons violating the postal laws.

The total number of cases of all classes made up during the last fiscal year aggregated 178,514, and the total number disposed of 179,084. The cases investigated and closed during the year consisted of 7,539 A

cases, 91,697 B cases, 52,109 C cases, 3,995 D cases, 23,648 F cases, and 96 R cases. There were on hand undisposed of on July 1, 1901, 3,134 A cases, 38,709 B cases, 40,061 C cases, 1,159 D cases, 4,191 F cases, and 73 R cases, or a total of 87,327 cases.

The totals of cases referred during the last five fiscal years were as follows: In 1897, 111,621; in 1898, 112,120; in 1899, 144,758; in 1900, 197,996; in 1901, 178,514; and the total number of cases closed in 1897, 112,679; in 1898, 114,824; in 1899, 115,846; in 1900, 169,505; in 1901, 179,084. The number remaining on hand in 1897 was 33,301; in 1898, 30,342; in 1899, 59,254; in 1900, 87,897; in 1901, 87,327.

From the foregoing figures it will be observed that the cases referred to inspectors for the four years ended June 30, 1900, averaged annually 141,624, and the total number of cases closed during the same period showed an annual average of 128,213. The total number of cases referred to inspectors during the fiscal year just closed aggregated 178,514, showing an increase of 36,890, as compared with the annual average of the preceding four years, and the total number of cases closed during the last fiscal year aggregated 179,084, showing an increase of 50,871 as compared with the annual average of cases closed during the preceding four years.

It also appears that the total number of C cases referred to inspectors during the last fiscal year was 33,092 less than the number of cases of this class referred during the previous year. This marked decrease in this class of cases is accounted for in part by the fact that the statutes require only biennial investigations in the matter of the responsibility of sureties on postmasters' bonds. As a result of this provision 27,774 bond cases were referred to inspectors during the fiscal year ended June 30, 1900, while during the fiscal year just closed only 8,990 cases of this class were referred for investigation.

These statistics show that, although the number of cases referred to inspectors during the last fiscal year was 19,482 less than the number referred during the former fiscal year, the total number closed during 1901 exceeded the number closed during the preceding fiscal year by nearly 10,000, while the total number of cases remaining on hand at the close of the last fiscal year was 570 less than the total number remaining on hand June 30, 1900.

The aim of the office has been to increase the efficiency of this branch of the service by close scrutiny of reports received during the year, for the purpose of requiring uniform methods in the several divisions throughout the country and securing the highest standard of work possible from inspectors in the field. That this has had the effect of stimulating the members of the force to greater efforts is apparent from the more satisfactory character of the investigations made, as evidenced by the more complete, concise, and carefully prepared reports submitted.

The appropriation for post-office inspectors and mail depredations for the fiscal year ended June 30, 1901, was $550,000. No increase of appropriation was asked for the year ending June 30, 1902, and the same amount, viz, $550,000, was appropriated.

It has not yet been possible to make an annual inspection of every money-order office, which is the end the Department has been endeavoring to reach for several years. The necessity and desirability of close supervision of a business of such tremendous magnitude is apparent, and Congress has been requested to grant an increase of $50,000 for the year ending June 30, 1903, the total amount of the appropriation requested being $600,000.

The number of offices inspected during the year ended June 30, 1901, was 23,032, while the number of money-order offices in existence at the end of the fiscal year was 30,529. It will thus be seen that about 7,497 money-order offices were not inspected. The offices not visited are naturally the smaller ones and those more difficult of access; and while the revenue from these offices would not be great, many of the postmasters have continued to employ wrong methods inherited from their predecessors, and in order that they might be given instructions which would insure the correction of irregularities it is necessary that these offices be visited at least once a year by an inspector. The annual inspections, even without considering the protection to the revenues, have been highly beneficial, and the interests of the service require at least one inspection a year of every money-order office.

A CASES, OR CASES RELATING TO THE REGISTERED MAIL.

All complaints received referring to depredations upon or irregularities in the registered mail are included in Exhibits A, B, and C. Exhibit A shows the total number and character of complaints received and referred for investigation. Exhibit B is composed entirely of complaints which have been received, investigated, and closed during the last fiscal year, while the statistics in Exhibit C relate to cases received in previous years which were on hand and not completed at the beginning of the last year and which were investigated and closed during the year. It will be observed that the total number of complaints of this class which were received, jacketed, and assigned to inspectors for action during the last fiscal year aggregated 8,033, of which 7,627 related to letters or first-class matter, and 406 to packages, or third and fourth class matter.

Of these cases 5,394 were investigated, reported upon, and closed, as shown by Exhibit B, from which it also appears that in 3,724 cases no actual loss had occurred, while in 1,356 the full amount of the alleged loss was recovered or collected, thus leaving only 314 to represent the actual number of cases in which loss was sustained.

Two thousand one hundred and forty-five cases which were referred to inspectors in previous years were investigated and closed during the fiscal year just ended. (See Exhibit C.) Of these cases actual loss occurred in only 536, as the amount of the alleged loss was recovered or collected in 678, and it was discovered that no loss had been sustained in 931 cases.

A comprehensive idea of the result of work which has been accomplished in this class of cases during the present year can be obtained by a glance at the following table, which shows the average results of the past five years:

Year.	Complaints.	Cases investigated.	O. K.	Paid.	Loss.	Pieces handled.
1896	5,709	5,887	3,081	1,570	1,236	15,106,336
1897	5,534	5,560	3,206	1,570	784	14,559,083
1898	6,445	6,320	3,618	1,834	868	15,600,220
1899	7,034	6,464	3,996	1,673	795	15,900,140
1900	7,165	6,432	3,831	1,848	753	18,386,332
Total for five years	31,887	30,663	17,732	8,495	4,436	79,552,111
Annual average	6,377	6,132	3,546	1,699	887	15,910,422
1901	8,033	7,539	4,655	2,034	850	20,814,501

Cases outstanding July 1, 1895 1,235
Cases outstanding July 1, 1900 2,601

From this it will be seen that the total number of complaints received during the five years was 31,887, and the total number investigated during the five years was 30,663, or an annual average of 6,132 cases investigated and closed, showing an average loss of 887 out of an average of 15,910,422 pieces of registered mail handled yearly, or a net loss of 1 piece in every 17,938 handled, being 14.4 per cent of the complaints investigated.

A comparison of the office records for the last two fiscal years shows that the total number of complaints affecting the registered mail received during the fiscal year 1901 was 868 more than the total number of the same character received during 1900. The total number of pieces of registered mail handled during the fiscal year 1901 was 20,814,501.

Of 5,394 registered cases which were referred, investigated, and closed during the last fiscal year, it was found that in 3,724 cases no actual loss had occurred, and in 1,356 cases the full amount of the loss alleged was recovered or collected, thus leaving only 314 cases in which losses were actually sustained, or 5.8 per cent of the total number of cases referred, investigated, and closed during the last fiscal year. The same percentage applied to the total number of complaints received (8,033) would indicate a total of 466 cases in which actual losses have been sustained, or one in every 44,666 pieces handled. Eighty-one were official letters and packages, of practically no money value, so that the actual total loss of letters containing money value was in the proportion of one in every 54,064 pieces handled.

The 5,394 registered cases above referred to represent complaints from every State in the Union, together with Porto Rico (in which there were 11) and the Hawaiian Islands (in which there were 64). Actual loss occurred in but one case in Porto Rico, and no actual loss was sustained in the Hawaiian cases. New York leads with 413 cases, in which there was an actual loss in 35; Mississippi follows with 332, and an actual loss in 10; Illinois had 316, with an actual loss in 16; Missouri with 297, and actual loss in 12; Texas 297, and actual loss in 20; Pennsylvania with 248, and actual loss in 11, and Arkansas with 207, and an actual loss in 9.

The losses in 1898 were 9.9 per cent of the total number of cases referred and investigated, or an average of 1 piece in every 24,608 pieces handled. In 1899 the loss was 8.7 per cent of the total number of cases referred and investigated, or an average of 1 piece in every 25,980 handled. In 1900 the loss was 7.2 per cent of the total number of cases referred and investigated, or an average of 1 piece in every 35,682 pieces handled, while the loss for the fiscal year under consideration was 5.8 per cent of the total number of cases referred and investigated, or an average of 1 piece in every 44,666 handled.

Recapitulation of A cases.

Cases outstanding July 1, 1900	2,601
Cases under consideration in the Department July 1, 1900	713
Cases referred for investigation	8,033
Total	11,347
Cases closed (previous year cases)	2,145
Cases closed (current year cases)	5,394
Cases under consideration in the Department July 1, 1901	674
Cases outstanding July 1, 1901	3,134
Total	11,347

B CASES, OR CASES RELATING TO ORDINARY MAIL.

All unregistered letters and packages transmitted in the mails are included in the general classification of ordinary mail. Millions of important communications and valuable inclosures are intrusted by the public to the mails yearly, with the confident expectation that they will reach destination in good order and safety; but in the most careful service errors are liable to occur, resulting in delay and occasional loss. It should not be inferred, however, that carelessness or even indifference is tolerated in handling the least valuable piece of ordinary mail. The post-office inspectors are as zealous in their endeavors to locate the criminal whose depredations are confined to ordinary mail as they are in cases involving registered mail, and even greater care is required to locate those who rifle ordinary mail only, because of the lack of facilities for tracing matter of this class.

As showing the importance of placing the name and address of the sender upon the envelope or wrapper, it is only necessary to state that thousands of letters deposited for transmission in the mails are misdirected, or not directed at all; and it is often impossible, even with all the facilities afforded by the Department, either to deliver these letters to the addressees or return them to the writers. It is also important that every depredation upon the mails and losses occurring therein which may come to the knowledge of the patrons thereof should be promptly reported to the Chief Post-Office Inspector.

As shown in Exhibit D, there have been 100,255 complaints received at this office during the last fiscal year affecting the ordinary mail. Of this number 52,306 referred to letters and 47,949 referred to packages. The above total shows an increase in number of 8,223, or a fraction over 8 per cent, as compared with the number of cases of this class received during the year 1900.

In addition to the 63,642 cases of this class which were referred and investigated during the fiscal year just completed, there were also 28,055 cases of the same class which had been received and referred in previous years, and which were closed last year, making a total of 91,697 B cases disposed of during 1901. Of the 63,642 cases referred and investigated during this year, it was shown that no loss had occurred in 12,576 cases, or nearly 20 per cent of the total complaints of this class received.

C CASES, OR MISCELLANEOUS COMPLAINTS AND INQUIRIES AFFECTING THE EMPLOYEES OR BUSINESS OF THE POSTAL SERVICE.

A reference to Exhibit E will show the number and character of this class of cases referred to inspectors for investigation during the fiscal year ended June 30, 1901, as well as the source from which the requests for such investigations emanated. It will be seen that the number of these references aggregated 42,957, of which 1,715 originated in the office of the First Assistant Postmaster-General, 410 in the office of the Second Assistant Postmaster-General, 577 in the office of the Third Assistant Postmaster-General, 39,624 in the office of the Fourth Assistant Postmaster-General (1,707 in the appointment division, 8,990 in the division of bonds and commissions, and 28,927 in the division of post-office inspectors and mail depredations), 62 in the office of the Assistant Attorney-General for the Post-Office Department, and 569 in the office of the Auditor for the Post-Office Department.

At the beginning of the fiscal year there were 49,213 cases brought forward from the previous year not closed. Add to this the 42,957 received during the year and we have 92,170 cases to be accounted for. Of this total 52,109 were closed, leaving 40,061 cases on hand July 1, 1901.

The following is a statement in detail, showing the number of cases relating to violations of the various sections of the Postal Laws and Regulations of 1893:

Number of section.	Subject.	Number of cases.
123, 211, 470	Irregularities on part of postmasters in the sale of postage stamps, false returns of cancellations, etc	392
327	Evasion of payment of proper rates of postage	269
331	Lottery matter in the mails	64
332, 333	Scurrilous and obscene matter	1,550
334	Use of mails for fraudulent purposes	1,669
368	Unlawful use of penalty envelopes	24
430	Post-offices located in barrooms	109
675 to 679	Carrying mail by private express	31
694, 695	Obstructing the mails	63
1420	Forging or counterfeiting money orders	6
1425	Embezzlement of letters containing inclosures, by postal employees	44
1430	Detaining, opening, or destroying letters, by postal employees	397
1431-2	Intercepting or stealing mail, by any person	793
1445	Willfully neglecting to deposit postal revenues, by postmaster	68
1450-1	Removing cancellations from postage stamps	322
1452	False personation of United States officer	1

By reference to Exhibit F it will be seen that of the 42,957 cases referred to inspectors for investigation during the last fiscal year, 18,812 were reported on and finally closed, leaving a balance of 24,145 referred during that period which were not closed.

A comparison of the last two fiscal years shows that there were 33,092 less cases of this class referred to inspectors in 1901 than during 1900, while the number of cases closed in 1901 was 2,499 more than the number closed during the previous year and 35,077 more than in 1899.

It will thus appear that although there were 40,061 cases of this class in the hands of inspectors on June 30, 1901, the number investigated and closed exceeded that of the previous year. The large number remaining on hand is explained by the fact that 19,302 inspection cases were made up during the year, a considerable portion of which did not reach the inspectors in time for investigation and closing prior to June 30, 1901.

D CASES, OR CASES REFERRING TO HIGHWAY ROBBERY OF THE MAILS, ROBBERIES OF POST-OFFICES, AND OTHER SPECIAL DEPREDATIONS.

Exhibit H embraces the class of investigations which relate to the robbery and burning of post-offices, wreckings, and other casualties occurring to postal cars; highway robberies of mail trains, messengers, stages, etc. The investigation of this class of cases requires persistent and patient effort on the part of inspectors.

The following is a comparative statement of the depredations and casualties treated in this class of cases during the fiscal years 1898, 1899, 1900, and 1901:

Year.	Robberies.				Postal cars burned and wrecked.	Post-offices burned.	Pouches lost.	Pouches cut or stolen.
	Post-offices.	Mail trains and stages.	Mail messengers.	Letter boxes.				
1898	1,547	42	2	55	65	544	407	417
1899	1,481	34	.....	76	46	563	488	401
1900	1,587	23	.....	76	92	586	602	511
1901	1,635	37	3	158	71	643	656	743

The above figures show a decrease in the number of postal cars burned and wrecked as compared with previous years noted, but an increase in the number of other depredations and casualties listed.

Of the 4,066 cases of this class referred during the year, 2,982 were investigated and closed. One thousand and thirteen cases referred during previous years were also reported, making a total of 3,995. There were outstanding July 1, 1901, 1,159 cases of this class.

The special feature which attracts attention in this class of cases is the fact that the number of post-offices robbed during the current year is 1,635, which, in comparison with the average number for the previous three years (1,538), shows an increase of over 6 per cent, with only a corresponding increase of 2.4 per cent in the number of post-offices.

CLASS F CASES.

Inquiries and complaints relating to international mail matter forwarded to and from foreign countries and in transit across the United States to a foreign country are designated F cases. For the most part these cases are simply inquiries relative to the delivery of foreign matter, which necessarily require considerable correspondence. But few need personal investigation by an inspector. During the year there were 23,098 of this class, of which 13,994 related to registered matter, 8,958 to the ordinary mail, and 146 were of a miscellaneous nature. To the 23,098 cases received there should be added 4,741 cases which were on hand at the beginning of the fiscal year, making a total of 27,839 cases on hand and received during the year. Of this number, 23,648 cases were closed. Investigation in 12,640 of these cases showed that no loss had occurred in the registered mails. Twenty-two cases related to investigations in which collections were made and the amount so collected disbursed through this office. Eighteen cases affecting registered matter were closed as chargeable to robberies. One thousand two hundred and fifty-one cases related to losses outside of the United States, and 221 cases related to alleged rifling not located. Of the 9,204 cases relating to ordinary matter which were closed during the year, 3,889 were reported without loss; in 5,315 cases the losses could not be located; 46 cases related to international money orders; 57 cases affected lotteries, and 99 cases were of a miscellaneous character. At the end of the year there were 4,191 cases on hand partially investigated, 256 being in the hands of inspectors.

The number of inquiries and replies received during the year which required translation into English amounted to 11,110. Of this number, 3,870 were translated by the foreign mails division of the Second Assistant Postmaster-General's office and 7,240 were translated by our own force.

The following summary of foreign cases shows the number and character of reports received, the number of cases disposed of during the current year, those remaining on hand from the previous year, and the cases which are now in an incomplete condition:

Summary of F cases.

[Showing the number on hand, received and disposed of during the fiscal year, and the number not completed at the beginning of the current year, July 1, 1901.]

Cases on hand July 1, 1900	4,741
Cases received during the year relating to registered matter	13,994
Cases received relating to ordinary matter	8,958
Cases received of a miscellaneous character	146
Total	27,839
Cases relating to registered matter closed without loss	12,640
Registered cases in which loss occurred abroad	1,251
Registered cases closed, showing loss by robbery in the United States	18
Registered cases closed in which loss was not located as between the United States and foreign countries	8
Registered cases closed, showing loss in United States	82
Registered cases closed in which the alleged rifling was not located as between the United States and foreign countries	221
Total registered cases closed	14,220
Ordinary cases closed without loss	3,889
Ordinary cases closed, loss not located	5,315
Total ordinary cases closed	9,204
Cases relating to international money orders closed	46
Cases relating to lotteries closed	57
Other miscellaneous cases closed	99
Total miscellaneous cases closed	202
Cases closed in which collections were made and sums disbursed through this office	22
Total number of cases closed during the year	23,648
Cases on hand, unfinished, July 1, 1901	4,191
Total	27,839

ARRESTS FOR OFFENSES AGAINST THE POSTAL LAWS.

The total number of arrests during the fiscal year, as shown by Exhibit I, was 1,611. Of this number 101 were postmasters, 40 were assistant postmasters, 65 were clerks in post-offices, 10 were railway postal clerks, 27 were letter carriers, 43 were mail carriers, and 19 were employed in minor positions in the postal service. The total number of post-office burglars arrested was 327, and the remainder of 979 were persons in no wise connected with the postal service.

Of the total number arrested (1,611), 1,032 were disposed of in United States courts, resulting in 634 convictions. Two died awaiting trial, 3 forfeited bail, 8 escaped from custody, while 55 were acquitted. In 80 cases proceedings were dismissed, 139 were discharged on preliminary examination, and 111 were discharged by the grand jury, leaving 461 cases pending in United States courts on July 1, 1901.

In State courts 77 cases were disposed of, resulting in 65 convictions and 12 acquittals, leaving 41 cases awaiting trial at the close of the fiscal year.

The following is a comparative statement of the depredations and casualties of this class for the past decade:

Year.	Number of post-offices.	Increase.	Post-offices burned.	Increase.	Post-offices burglarized.	Increase.	Burglars arrested.	Increase.
		Per cent.		*Per cent.*		*Per cent.*		*Per cent.*
1891	64,329	3	444	24	* 868	[1]0.5	178	35.9
1892	67,119	4.3	498	12.2	1,108	27.6	203	14
1893	68,403	1.9	530	6.4	1,195	7.9	228	12.3
1894	68,805	.6	558	5.3	1,621	35.6	351	53.9
1895	70,064	1.8	532	[1]4.7	1,561	[1]3.7	423	20.5
1896	70,360	.4	532	.....	1,474	[1]5.6	470	11.1
1897	71,022	.9	500	[1]6	1,573	6.7	419	[1]10.9
1898	73,570	3.5	544	8.8	1,547	[1]1.7	441	5.3
1899	75,000	1.9	563	3.4	1,481	[1]4.2	361	[1]18
1900	76,688	2.2	586	4	1,587	7.2	320	[1]11.3
1901	76,945	.3	643	9.7	1,635	3	327	2.1
1891	64,329	.....	444	.....	868	.....	178	.....
1901	76,945	19.6	643	44.8	1,635	88.3	327	83.7

[1] Decrease.

From this table it will be noted that while the number of post-offices in the United States has increased only 19.6 per cent during the last ten years, the increase in the number of post-offices destroyed by fire during that period has been 44.8 per cent and the number of post-office robberies has increased 88.3 per cent, while the increase in the number of post-office burglars arrested has been 83.7 per cent.

IDENTIFICATION OF CRIMINALS.

The matter of the identification of criminals is one of importance. The section having charge of this feature of the work has been in operation since July 1, 1899, and promises to be valuable to the service. The Bertillon system of measurement and description is used whenever practicable, and there are now on file in the section the descriptions and histories of many criminals. The identification section, through the chief post-office inspector, is a subscriber to the National Bureau of Identification. To this national bureau are sent photographs, measurements, and descriptions of criminals when arrested, and the information of that institution is at the command of the post-office inspectors.

REWARDS.

The standing rewards offered by the Postmaster-General for the apprehension and conviction of post-office robbers have secured the earnest cooperation of local officers and the detective and police forces of the country, resulting in the arrest of a considerable number of particularly bold and annoying depredators of this class.

During the year there have been filed with the Department 105

claims for rewards, and there were on hand at the close of the fiscal year 1900 64 claims of this character, making a total of 169 claims under consideration during the year just closed. Of this number, 11 claims were rejected, 73 were on hand at the close of the year, and 85 were paid as follows: Three claims, making a total of $500, chargeable to the appropriation of 1898; 20 claims, making a total of $4,925, chargeable to the appropriation of 1899; 60 claims, making a total of $11,450, chargeable to the appropriation of 1900; 2 claims, making a total of $100, chargeable to the appropriation of 1901, the entire number of claims paid during the year making a total of $16,975.

From the above statistics it will appear that there was an unexpended balance of $24,900 on hand July 1, 1901, on account of the appropriation for rewards. There were, however, under consideration at that time 41 claims which, if allowed, will be payable from the appropriation for 1901. This number will be considerably augmented by claims to be filed for recent arrests which relate to offenses committed during the last fiscal year. When these rewards have been adjudicated and settled, their payment will consume a large proportion of the unexpended balance.

Attention is called to the fact that during the last fiscal year 60 claims, amounting to $11,450, were paid from the appropriation of 1900 (including one claim for $1,000), and 20 claims, amounting to $4,925 (including one claim for $2,000), were paid from the appropriation of 1899.

The beneficial effects resulting from the money expended on account of these rewards is apparent, and I respectfully recommend that the appropriation of $25,000 for this purpose be renewed.

Financial statement.

Divisions.	Cash on hand July 1, 1900.	Cash collected.	Total cash.	Cash disbursed.	Balance on hand July 1, 1901.
Boston		$14,663.74	$14,663.74	$14,648.74	$15.00
Chattanooga	$255.50	38,329.69	38,585.19	38,492.79	92.40
Chicago	1,010.00	39,977.34	40,987.34	40,987.34	
Cincinnati	4,225.65	24,248.21	28,473.86	28,473.86	
Denver		25,514.99	25,514.99	25,514.99	
New Orleans	4.15	41,454.41	41,458.56	41,458.56	
New York		13,644.04	13,644.04	13,644.04	
Philadelphia	1.42	45,083.91	45,085.33	45,057.97	27.36
St. Louis	5.00	44,983.73	44,988.73	44,985.03	3.70
St. Paul		26,210.44	26,210.44	26,206.19	4.25
San Francisco	10.00	12,055.86	12,065.86	12,065.86	
San Juan		952.38	952.38	952.38	
Spokane		21,584.75	21,584.75	21,584.75	
Washington	18.75	32,732.21	32,750.96	32,750.96	
Total	5,530.47	381,435.70	386,966.17	386,823.46	142.71

The above table shows by divisions the amounts of money collected or recovered and disbursed during the fiscal year.

Adding to $5,530.47, the amount of cash on hand at the close of the last fiscal year, the sums collected during the past year, $381,435.70, the total to be accounted for is $386,966.17. Of this amount $386,823.46 has been disbursed, leaving an unexpended balance of $142.71 at the close of the year. This money represents collections of balances due from postmasters, penalties for violations, amounts recovered on account of fraudulent use of the mails, and collections of amounts illegally received by postmasters through false cancellations, as well as collections in cases of robberies of post-offices, wrecking of mail trains, highway robberies of mail stages, and moneys received on account of

loss in the ordinary and registered mails attributable to carelessness, accident, or larceny.

SPECIAL WORK IN ALASKA.

The general conditions in Alaska have become more settled, and the postal service has been fairly well organized during the last four years throughout the Yukon and the very remote sections along the north coast of the Bering Sea. But one arrest was made in that Territory during the year, which speaks well for the integrity of the service, especially in view of the remoteness of the Territory and the unusually large amounts of money that have been handled at the more important post-offices.

A post-office was established at Point Barrow, which is doubtless the northernmost post-office in the world.

CUBA.

Inspector M. C. Fosnes was continued throughout the entire year as director-general of posts of Cuba and still holds that position, and Inspector F. M. Hamilton remained as acting chief special agent. Inspector J. R. Harrison was acting postmaster at Habana during the greater part of the fiscal year. The services of these inspectors merit special commendation. By their untiring work they have firmly established the Cuban postal service upon a sound and economical basis and ably carried out the plans of reorganization inaugurated during the latter part of the fiscal year 1900. The gratifying results of the reorganization and the economical and honest administration of the postal affairs of the island are shown by a comparison of the receipts and expenditures of the fiscal year 1901 with those of the fiscal year 1900, as follows:

Revenues:	
1900	$246,912.31
1901	367,634.50
Increase	120,722.19
Or 48.89 per cent.	
Expenditures:	
1900	598,497.69
1901	451,437.89
Decrease	147,059.80
Or 24.57 per cent.	
Deficit:	
1900	352,585.38
1901	83,803.39

This is certainly a creditable showing in view of the fact that many expenditures were necessitated because of unwise contracts that had been entered into by those in charge of the postal service of the island during the preceding fiscal year and which could not be abrogated.

Notwithstanding the reduction of over $147,000 in the expenditures, or about 25 per cent, the service has been greatly improved, due to careful and intelligent supervision by Inspector Fosnes. The increase in the revenues of $120,722.19, or 48.89 per cent, is not due to an increase in the postal business, but to a proper accounting for moneys received.

The management of the Habana post-office deserves special attention.

When Inspector Harrison took charge the expenses of the office amounted to $130,260 per annum, and when he retired, after having been in charge of the office less than a year, the expenditures had been reduced to less than $100,000, and at the same time great improvements were made in the efficiency of the postal service of the city.

PORTO RICO AND HAWAII.

The island of Porto Rico was formed into a division of post-office inspectors, with an inspector in charge, one inspector, and one clerk, the headquarters of the division being at San Juan. It is necessary to maintain an office at that place for the reason that so many postmasters in the island are unable to correspond with the Department direct, on account of their inability to write the English language. The correspondence between the postmasters and the Department passes through the office of the inspector in charge, and postmasters' accounts and reports are examined by him, and if found to be incorrect postmasters are required to correct them before sending them to the Department, thereby saving a great deal of delay in adjusting their accounts.

A division, with an inspector in charge and one clerk, for the Territory of Hawaii was established at Honolulu. The same conditions which made such action necessary in Porto Rico exist in Hawaii, and the business is handled in the same manner.

RECOMMENDATIONS.

The act of June 13, 1898, providing that assistant postmasters, cashiers, and other employees in post-offices of the first, second, and third classes shall give bond direct to the United States, has not proven satisfactory in operation and has raised a number of legal questions, which, if decided in accordance with the contention of sureties and postmasters, may result in serious loss to the Government. Originally a postmaster was responsible under his bond for all moneys received, and it was his duty to account therefor, even if a loss was due to a subordinate. A vexatious question as to responsibility for losses has arisen since the act referred to became effective. If the postmaster makes good the loss, there is no provision for him to succeed to the rights of the United States under the clerk's bond. If it should be judicially determined that the bonding of the clerk direct to the United States relieves the postmaster, the Government would have no recourse in the event the loss exceeded the amount of the bond. I therefore earnestly recommend that the act be repealed, and suggest a law be enacted requiring assistant postmasters, cashiers, and other employees to give bonds to postmasters direct and holding postmasters responsible under their own bonds for any and all acts and defaults occurring at their respective offices.

I further recommend:

That provision be made for the payment of incidental expenses incurred by local officers or others in the arrest, detention, and keeping of prisoners charged with violations of the postal laws until such prisoners can be transferred to the custody of a United States marshal.

That a statute be enacted authorizing post-office inspectors to take out search warrants whenever the same may be necessary in the prosecution of their official duties.

That an appropriation be made for the purpose of constructing look-

outs wherever, in the opinion of the Postmaster-General, the same may be needed.

That the interstate-commerce law be amended to prohibit common carriers—to wit, telegraph and express companies—or any of their employees from aiding and abetting in the green-goods or lottery swindles or any other scheme, carried on partly by mail and partly by common carrier, and which is in violation of the postal laws.

Respectfully submitted.

J. L. BRISTOW,
Fourth Assistant Postmaster-General.

The POSTMASTER-GENERAL.

REPORT OF THE AUDITOR FOR THE POST-OFFICE DEPARTMENT TO THE SECRETARY OF THE TREASURY.

TREASURY DEPARTMENT, OFFICE OF THE AUDITOR
FOR THE POST-OFFICE DEPARTMENT,
Washington, D. C., October 3, 1901.

SIR: In obedience to the law providing for the organization and operation of this Bureau, I have the honor to present the following report of said operations and of the financial transactions of the Post-Office Department during the fiscal year ended June 30, 1901:

On December 15, 1900, Hon. A. L. Lawshe, deputy auditor, who had been absent on detached service as acting auditor for the postal department in Cuba for several months, resigned his position in this Bureau and accepted the appointment of auditor for the Philippine Archipelago. Hon. N. L. Chew, Assistant Register of the Treasury, who had been acting deputy auditor during the absence of Mr. Lawshe, was thereupon transferred and appointed Deputy Auditor of this Bureau, and continued uninterruptedly the work he had previously so efficiently performed here. The appropriation bill for the fiscal year beginning July 1, 1901, made provision for an additional deputy auditor, which position was filled by the appointment of the Hon. Harrison Allen, who assumed the duties of his office on the day specified.

The executive staff of the Bureau is now as follows: Auditor, Henry A. Castle, Minnesota; deputy auditors, Nolen L. Chew, Indiana, and Harrison Allen, North Dakota; chief clerk, John B. Sleman, Illinois; law clerk, David H. Fenton, Indiana; disbursing clerk, B. W. Holman, Wisconsin.

ORGANIZATION AND WORK OF THE BUREAU.

The duties of the Auditor's Bureau are performed by the employees of the seven divisions thereof authorized by law, viz:

The bookkeeping division, David W. Duncan, of Pennsylvania, chief, with 90 clerks, prepares the quarterly and annual reports of receipts and expenditures; receives and settles postal accounts of postmasters, keeps general ledger accounts of the postal service, and individual ledger accounts with each postmaster and mail contractor.

The collecting division, Arthur Clements, of Maryland, chief, with 30 clerks, reviews all postal accounts in which differences have been

found by the bookkeeping division; collects balances due from and pays balances due to postmasters on postal accounts; has charge of the postal files, and conducts correspondence relating to final settlements.

The pay division, A. M. McBath, of Tennessee, chief, with 39 clerks, adjusts and reports for payment accounts for transportation of mails by railroads, steamboats (foreign and domestic), star, mail messenger, rural free delivery, and special mail service; audits accounts of post-office inspectors, Superintendent and assistant superintendents Railway Mail Service, and all miscellaneous accounts.

The foreign division, D. N. Burbank, of New York, chief, with 16 clerks, adjusts and settles postal-note and money-order accounts with foreign countries; settles accounts with steamship companies for the ocean transportation of mail; examines statements of weight of mail dispatched to foreign countries, and conducts all correspondence with the above duties.

The inspecting division, B. A. Allen, of Kansas, chief, with 108 clerks, examines postmasters' weekly, semimonthly, and monthly statements of money-order business with accompanying vouchers; compares each money order with the credit claimed for its payment by the postmaster; detects and corrects errors; verifies the fees charged by postmasters for issuing orders, and makes complete additions of the debit and credit sides of the statements.

The assorting and checking division, R. M. Johnson, of Indiana, chief, with 136 clerks, assorts by States, offices of issue, and numerically all money orders received from the inspecting division; compares them with entries on the debit side of money-order statements, and notes all errors and discrepancies for the attention of the recording division.

The recording division, M. M. Holland, of Ohio, chief, with 81 clerks, audits and adjusts the money-order accounts of postmasters and has charge of the correspondence relating thereto. Quarterly and annual statements of the money-order transactions of the United States, both domestic and international, with the revenue derived therefrom, are prepared in this division for the annual report.

The employees enumerated above, together with the official staff, messengers, laborers' force, and charwomen, aggregate 543 persons on the pay rolls of the Bureau.

A renewed expression of thanks by the head of the office is due to all his assistants on the official staff, to each of the chiefs of division, and to the large number of zealously efficient employees for their continued and increasing devotion to the duties severally assigned them. Without their unswerving cooperation and unwearied exertion the results accomplished, as set forth in the following pages, would have been manifestly impossible.

ORIGIN OF THE ACCOUNTING SYSTEM.

The American accounting system is the right arm of the lawmaking power, and was established for the avowed purpose of exacting strict obedience to statutes. Executive authorities must move within lines prescribed by legislative enactment. Outside those lines there is no check but the will of the ruler, and that is despotism. Corrupt and decaying nationalities have no effective accounting system. Its existence and vigorous operation is an index of purity of government and a measure of the civilization of a people. The Auditor for the Post-

Office Department is governed by laws which give him a wider field and larger discretion than are conferred on any of the other auditors attached to the Treasury Department.

Prior to 1836 the Post-Office Department had no auditor assigned to it. Accounts were received, recorded, and settled in the Department itself; remittances were made direct to the Postmaster-General, who, after paying expenses of the service, deposited balances, if any, at optional and irregular intervals in the United States Treasury. Scandals naturally arose under this practice, and caused so much clamor that President Andrew Jackson made the matter a subject of special attention in an annual message. Congress instituted investigations which resulted in the enactment of a law establishing the Auditor's Bureau as a separate and independent institution, which had previously been the case in other branches of the Government. Since that time the accounting business of the postal service has been independent of the head of the Post-Office Department, in accordance with the general policy of the Government that the authority which directs an expenditure must not entirely control the settlements therefor.

On this foundation have been built up the present methods of keeping accounts in this Bureau. As new features have been from time to time added to the postal system new divisions have been created, and the methods in vogue have been readjusted to correspond thereto.

The following table gives the names of the Auditors for the Post-Office Department from the organization of the Bureau, in 1836, to the present time, showing State from which the Auditors were appointed and their respective terms of service:

Name.	State.	Period of service.	
		From—	To—
C. K. Gardner	New Jersey	July 2, 1836	Mar. 17, 1841
Elisha Whittlesey	Ohio	Mar. 18, 1841	Dec. 18, 1843
M. St. Clair Clark	District of Columbia	Dec. 19, 1843	Mar. 28, 1845
P. G. Washington	Virginia	Mar. 29, 1845	Nov. 19, 1849
J. W. Farrell	Pennsylvania	Nov. 20, 1849	Apr. 9, 1853
Wm. F. Phillips	Virginia	Apr. 10, 1853	Sept. 30, 1857
Thomas M. Tate	do	Oct. 1, 1857	Apr. 21, 1861
Green Adams	Kentucky	Apr. 22, 1861	Oct. 18, 1864
Elijah Sells	Iowa	Oct. 26, 1864	May 8, 1865
Isaac N. Arnold	Illinois	May 9, 1865	Sept. 30, 1866
H. J. Anderson	Maine	Oct. 1, 1866	May 3, 1869
J. J. Martin	Alabama	May 4, 1869	Mar. 17, 1875
C. C. Sheats	do	Mar. 18, 1875	June 30, 1875
J. M. McGrew	Ohio	July 1, 1875	June 2, 1881
J. H. Ela	New Hampshire	June 3, 1881	Aug. 21, 1884
R. F. Crowell	Minnesota	Sept. 8, 1884	Apr. 5, 1885
D. McConville	Ohio	Apr. 6, 1885	Apr. 30, 1889
T. B. Coulter	do	May 1, 1889	Apr. 2, 1893
J. B. Brawley	Pennsylvania	Apr. 19, 1893	Apr. 15, 1894
Geo. A. Howard	Tennessee	Apr. 16, 1894	May 16, 1897
Henry A. Castle	Minnesota	May 17, 1897	

The absolute necessity for an accounting system so forcibly presented to the mind of the President nearly seventy years ago has been reiterated and emphasized year by year through the rapid growth of our postal service and the phenomenal increase in amount of financial transactions therewith connected.

MAGNITUDE OF INTERESTS INVOLVED.

When this Bureau was established, in 1836, the total financial transactions of the Post-Office Department were less than six millions

annually. If the necessity for a rigid enforcement of correct accounting methods in every branch of the service was manifest then, how much greater that necessity now, when the aggregate of such transactions, as shown in the following pages, is over $803,000,000 for the fiscal year under consideration.

The items which go to make up the sum total of these transactions are as follows:

Revenues of the postal service	$111,631,193.39
Expenditures of the postal service	115,554,920.87
Total amount of money orders issued	294,618,680.99
Total amount of money orders paid	281,554,711.72
Aggregate	803,359,506.97

The postal revenues are largely derived from the sales of stamps and stamped paper. A ledger account of those revenues, together with credits for services and disbursements, must be kept with each of the 76,948 postmasters now in office. The average amount of 36,000,000 domestic money orders issued annually is $7.90. The debit and credit for issue and payment of each order must be carefully audited and a ledger account kept with each of the 30,898 postmasters authorized to sell and pay money orders. Every order so issued and paid comes finally to the Auditor's Office as a voucher, where it must be handled five times and checked twice by the postmasters' accounts before the latter can be accepted as correct for an entry in the money-order ledgers.

EXTRA WORK ACCOMPLISHED.

In addition to the increasing volume of work required by the rapid growth of the postal service, a large amount of other work has been successfully accomplished. Credit is due to many clerks for their cheerful, efficient response to the unusual demands upon their services. Once in six years new books are opened, and we have just completed the task of transferring 77,000 postmasters' accounts to new ledgers. To illustrate the magnitude of this work I may state that in March, 1901, this office (bookkeeping division) placed with the Government Printing Office, the largest plant of its kind in the world, an order for 208 large, closely ruled ledgers. It was the largest single order ever received by them. The requisition has been filled and the books all opened.

We also prepared for the "Blue Book" a list of all post-offices in the United States and our new possessions, giving the county and State where located, and the name and compensation of the postmaster; also a list giving the number of every mail route and the name and pay of the contractor.

A new "long and short leaf ledger" has been devised in which to keep accounts with Presidential postmasters. This book combines the features of a ledger and a register. It will save, in part, a duplicate record of accounts. Eleven or twelve of these books each year will take the place of six registers of equal size every year and sixty-five large ledgers every six years. The new method will save time and money.

REGISTERING QUARTERLY POSTAL ACCOUNTS.

It had long been the practice of great numbers of postmasters to send their accounts by registered mail. This was deemed unnecessary,

besides imposing much useless work on postal employes handling the mail in transit, and in receiving, receipting for, and examining registered matter in this office. In the early part of my administration postmasters were instructed to forward their reports by ordinary mail, with the result that only fifteen reports for the quarter ended June 30, 1901, were received by registered mail.

QUARTERLY POSTAL ACCOUNTS IMPROPERLY ADDRESSED.

Formerly a very large number of postal accounts which should have been sent to the Auditor were erroneously forwarded to other offices, mainly to that of the Third Assistant Postmaster-General; 10,962 accounts for the quarter ended September 30, 1898, being over 15 per cent of the total number of reports, were so mailed. The matter was taken up for correction, postmasters instructed, and a special envelope (3 G) devised and supplied to postmasters in which to mail their reports. This has worked admirably, and for the quarter ended June 30, 1901, only 409 accounts were improperly forwarded to other offices.

DETAILS OF OFFICE WORK.

The number of employees on the official register of the postal service exceeds the combined force of all the other Executive Departments. This fact affords a key to the bewildering variety of details involved in the settlements of that service, which are entirely performed in this Bureau. The correspondence involved, the number of reports to be received and examined, the number of vouchers to be handled, all run into figures far exceeding those of any other accounting office in the world, being greatly in excess of those reported by all the other auditors of the different branches of this Government combined. Leading features of the current work of the Bureau during the past fiscal year are set forth in the following statement:

Letters written, copied, and mailed	59,894
Letters received	756,866
Circular letters prepared and transmitted	672,931
Accounts received and settled (by divisions)	1,128,694
Vouchers (money orders) checked twice (debit and credit) and filed in consecutive numerical order by offices of issue	35,926,095
Other vouchers accompanying money-order statements	12,352
Vouchers accompanying postal accounts examined and filed with their respective accounts	2,360,000
Vouchers accompanying miscellaneous accounts	318,622
Postmaster-General's orders received, verified, and recorded	38,643
Fines and deductions in mail carriers' accounts ordered by the Postmaster-General and adjusted	17,846

AN EMERGENCY INCREASE OF FORCE.

A phenomenal increase of the volume of postal money orders thrown upon this Bureau during the month of January, 1901, was largely due to the amazing stimulus to the so-called "holiday business" of the month preceding, made possible by the wonderful prosperity of the country. The total weight of money orders received during January was 9,026 pounds, as compared with 6,352 pounds during the corresponding month of 1900. This increase alone involved the labor of one person for 1,500 days, or fifteen persons for 100 days, and was thus thrown upon our money-order divisions, already strained to the utmost by the regular influx of these vouchers.

When this condition developed I requested of the Treasury Department that authority be asked from Congress, as an emergency measure, for the appointment of fifteen temporary clerks from March 1 to June 30, 1901. The request was transmitted to the Speaker of the House of Representatives by the honorable Secretary of the Treasury, February 8, 1901, and printed as House Doc. No. 444, Fifty-sixth Congress, second session. The request was promptly complied with, and the increase asked for was provided in the urgent deficiency bill. The clerks appointed were transferred from the Bureau of Engraving and Printing, under civil-service rules, and served acceptably in this Bureau until July 1, 1901, when, without exception, they were appointed as a portion of the permanent increase of force allowed by the executive, legislative, and judicial appropriation bill for the fiscal year ending June 30, 1902. But for this timely assistance the unexampled flood of additional work thrown upon the office during January would have disarranged and delayed the operations of the money-order divisions, to the great damage and discredit of the accounting service.

The increase thus set forth and provided for, unprecedented as it was, proved to be but a premonition of a further steady increase in the money-order business of the country throughout the entire year. Month by month the records of this office show that the number of money orders received increased as compared with the corresponding months of the previous year at a ratio far beyond anything previously known in the history of the office. This actual increase in number of vouchers received, unlike augmentations of some other figures in keeping accounts, positively involves an exact equivalent of increased labor to be performed. By the most strenuous exertions, aided by numerous details from other branches of the Treasury Department, we have been enabled to keep the money-order work measurably current. This has been done only by imposing a strain and pressure on employees which can not be permanently maintained, as well as by the neglect and disregard of imperative requirements in other divisions of the Bureau which are suffering for lack of adequate help. It is a manifest duty of the Government, so long as it provides for and encourages the money-order service, so convenient to the people, to supply at all times the necessary force to promptly adjust the accounts involved therein. To allow settlements to become seriously in arrears is to stimulate and encourage embezzlements, defalcations, and irregularities in a service which requires the handling of immense amounts of money by thousands of agents, a certain proportion of whom always prove careless or dishonest.

IMPROVEMENTS IN ACCOUNTING METHODS.

The business of the office is expanding so much more rapidly than provision is made for it by increase of clerical force that the whole Bureau is working under a constant strain which can only be met by stimulating efficiency to the utmost and by every possible simplification of methods now in use. In so important an enterprise change and extension are unremitting. New conditions confront us on every hand, each requiring alert attention to supply requisite checks on public expenditure, and every year discloses defects even in long-established procedures which must be corrected if the highest attainable accuracy is

held in view. Not only are we obliged to keep correct accounts with all branches of the postal service for the purpose of our own settlements with postmasters, etc., but we are almost daily called upon for information by the Post-Office Department which is used as a foundation for proceedings against postmasters and other employees or for determining their status and efficiency. We must be ready to promptly furnish such information and are responsible for its accuracy. The official tenure, even the personal liberty, of a postmaster may depend upon the statement of his accounts at a specified date furnished by this office. If that statement is incorrect, grave injustice may be done either to the Government or to the individual.

Previous annual reports have enumerated many important improvements in methods which have been introduced during the incumbency of the present head of the Bureau. These improvements, suggested either by the necessities of the case or by the long experience of zealous and efficient employees, have wrought manifest benefits to the public service. Additional improvements made during the past year have still further simplified or made more effective various branches of the office work. Others are in contemplation and will be put in operation as rapidly as their practicability is developed and the clerical force at our disposal will justify.

Still other improvements and modifications of existing methods, which have often been suggested in my official reports, can not be effected without a largely increased clerical force and, in some cases, amendments to the laws by which we are governed. Defective methods still prevail to an extent which, to say the least, must still serve as a warning against adding unnecessary new features to our already overweighted postal service.

DELINQUENT POSTAL ACCOUNTS.

As late as 1890 there were thousands of delinquent accounts each year. This condition was gradually improved, and when a change in the system of auditing was made, April 1, 1892, the number very rapidly diminished. For the quarter ended September 30, 1894, there were only 358 delinquents, and it is most gratifying to report that for the quarter ended June 30, 1901, there are only 14 delinquent accounts, all fourth class. Two of these accounts are due from offices in Alaska and 3 from offices in Hawaii, leaving only 9 delinquents within the United States proper. This is the result of the close check kept by the bookkeeping division on the rendition of accounts and to the untiring zeal and energy of Mr. C. F. Cummins, who is specially charged with this work.

The following is an exhibit, by quarters, of delinquent accounts for the past three years:

Quarter ended—	Fiscal year—		
	1899.	1900.	1901.
September 30	58	37	38
December 31	54	22	25
March 31	47	22	14
June 30	61	26	14
	220	107	91

When a postmaster is habitually delinquent, and refuses or neglects to render accounts and comply with instructions of the Auditor, a case is made up and by special letter laid before the Fourth Assistant Postmaster-General, who usually removes the offending officer or discontinues the office. Through hearty cooperation of the Post-Office Department many changes for the good of the service have been made.

PERILS INCIDENT TO DEFECTIVE METHODS.

I can emphasize, but need not reiterate, statements made in my annual reports for the last two preceding fiscal years in regard to dangers which would follow an inconsiderate engraftment of various projects which are constantly the subjects of proposed Congressional legislation. The promoters of the postal savings bank, the postal telegraph, etc., are still insistent, but few or none of them exhibit any adequate conception of the vital importance of the accounting function in the gigantic enterprises their enactments contemplate. Not content with these suggestions, some of the leading journals of the country in circulation and supposed influence urgently invite attention to the establishment of a life insurance bureau which shall issue policies guaranteed by the Government, and thereby provide another official means for gathering in, investing, and distributing the savings of the people. Pathetic tales are told of men who have invested their savings in our life insurance companies only to find that the companies had failed just at the time when the policies were likely to mature. It does not occur to the promoters of this and other enterprises of state socialism that failures and disappointments are incident to all kinds of commercial and financial business; that if the Government is to protect all its people against losses by investments, financial, industrial, or otherwise, it must practically conduct all the business of the country, guarantee prompt and liberal returns from all classes of investments, and devise some now incomprehensible method of raising the funds necessary to pay fat dividends to all citizens, thus making a universally happy, prosperous, and contented people.

It is a significant corollary to the comments in my last annual report on the proposition to attach the telegraphic system of the country to our postal service, and the statement there made that this experiment in Great Britain had proved notoriously unprofitable, that the chancellor of the exchequer, replying to pointed questions in the House of Commons, recently admitted that the annual loss to the Government on its postal-telegraph system was $3,500,000 per annum, besides all interest on the original investment, and that such losses had aggregated more than $41,000,000 since the Government had taken control of the lines. The reason for the loss, as officially stated, is that the public is eager for more rapid communication than the revenues warrant, thus leading to unproductive extensions in obedience to an irresistible popular demand. The only remedy that can be applied if the Government maintains the control is to stop unproductive extensions, but that would soon render the service highly unpopular. It was proposed and strongly supported during the discussion that the Government should lease all its postal-telegraph lines to a private corporation, thus retiring definitely and permanently from the business and confessing that the experiment had proven a failure.

Improvements in the postal system and extensions along legitimate

lines in channels already marked out for this widely extended and most useful institution are not only clearly admissible, but are absolutely essential to the development and prosperity of the country. Even these extensions, however, as has often been conclusively demonstrated, are unprofitable—every engrafted feature, such as registry, free delivery, money order, merchandise post, and other branches, being conducted at a loss, which is only measurably provided for by profits on transporting and delivering first-class mail matter. In other words, the mail system has innumerable ramifications, but the 2-cent letter stamp pays for it all. How much or how little the respective losses on these different branches may be our present defective accounting methods give us no means of exactly determining. There is a double warning, then, against incorporating additional new and expensive outgrowths in the fact that we have already enough deficit-creating features, and in the still more vitally important fact that the accounting system now in operation does not enable us to properly care for the various branches already in vigorous operation.

ACCOUNTS OF MANUFACTURE AND DISTRIBUTION OF STAMPS, POSTAL CARDS, ETC.

Attention was called in the annual report for last year to the fact that no account had ever been kept in this Bureau with the Post-Office Department proper of postage stamps, stamped paper, etc., the cash items from sale of which are derived almost the entire revenues of the service. That such an account ought to have been opened when postage stamps were first introduced, and continuously kept until this time, seemed to be a logical requirement of the situation and in analogy with the practice of other departments of the Government. I have caused inquiries to be instituted during the year that has elapsed looking to the practicability of opening and maintaining such an account, provided adequate means were supplied by the appropriation bill for the requisite clerical force. The investigations have proceeded far enough to disclose the extreme difficulty of inaugurating such a scheme at this late day, but the very difficulties encountered stimulate an additional conviction of the imperative necessity therefor.

The Bureau of Engraving and Printing of the Treasury Department is the contractor for the manufacture of all denominations of postage stamps. Private corporations and individuals in different cities manufacture postal cards, stamped envelopes, and stamped wrappers for the Department. The safeguards employed by the Bureau in printing and issuing notes and Government securities are likewise thrown around the printing and issuing of postage stamps, and the protection seems ample. No such effective safeguards can, under the present arrangement, be applied to the outside contractors who manufacture the other varieties of stamped paper mentioned, though the Post-Office Department is manifestly doing its best to insure the integrity and safety of the different processes. But, in the interest of good accounting and the double check which it is the policy of the Government to throw around all its fiscal operations, there is still abundant reason for believing that this Bureau should pay some attention to the primary work of handling and distributing these articles, which are, to all intents and purposes, Government money or securities, for the correct handling of which every official who touches them should be pecuniarily account-

able. The investigation will be further prosecuted with a view of developing, if possible, some simple, practicable method of inaugurating effective accounts in this line, and the result, when reached, will be duly reported.

RELATIONS OF THE AUDITOR TO THE DEPARTMENT.

The law which provided for the establishment and operation of the Auditor's office in connection with the postal service, while stipulating specifically for its absolute independence, did not, of course, contemplate that its functions should be exercised in any spirit of antagonism. While obedience to law must be rigidly exacted and expenditures strictly limited to the amounts granted, every effort should be made for a harmonious adjustment of all relations between the bureau and the Post-Office Department. Under the present administration such a spirit of harmonious cooperation has prevailed, and with the happiest results. The honorable Postmaster-General and all his efficient bureau and division chiefs have, as a rule, at all times cheerfully cooperated with this office in so arranging expenditures and the accounts thereof rendered by subordinates that every technical requirement of the law should be fully observed. No detriment to the postal service has occurred, but increased efficiency, rather, and the spirit manifested has made the work of the Auditor's bureau much less difficult than it otherwise would have been. When the Auditor and the Department disagreed as to the legality of any innovation, and patient conference failed to reconcile the disagreement, cases were made up and submitted to the Comptroller for final adjudication with the least possible delay and derangement to the plans of the Department. Whenever the matter thus became finally adjudicated, the executive heads of the Department promptly conformed their action thereto, and the construction of law thereby established became the rule both for the Department and the Auditor's office. A business enterprise of such enormous magnitude and widely diversified functions as the United States postal service could be easily hampered, disarranged, and crippled by any lack of harmony between the executive and the accounting authorities. That no such trouble has occurred, while distinctly attributable to the regard for law exhibited by the officials of the Post-Office Department, is also accepted as evidence of the sentiment which has prevailed in this bureau favorable to the smoothest working of the postal machinery within limits inexorably fixed by legislative enactments.

RELATIONS OF THE BUREAU TO POSTMASTERS.

The Auditor's bureau has direct and most intimate relations with every postmaster in the United States. While we have no control over the discipline of the officers or the authority for making expenditures, all the financial transactions of postmasters and those for which they are responsible come directly under the jurisdiction of the Auditor, are subject to review in this office, and are finally settled, recorded, and balanced here. About 77,000 postmasters are now in commission, their emoluments ranging from a very few dollars to the maximum salaries allowed in the largest cities, and their disbursements in some cases reaching hundreds or thousands or millions of dollars each. All

classes and conditions of men are represented on this great roll of Government officials. Almost without exception the postmasters in cities and larger towns are men of superior business qualifications, and under them are employed armies of hard-worked clerks and letter carriers, all giving their best energies to the performance of their respective duties. Postmasters of smaller villages and isolated neighborhoods are necessarily in many cases men untrained in business, having a compensation so meager as to afford little encouragement to zealous performance of duty, and they are naturally indifferent to a service which is of so little personal importance to them. But even these men, as a whole, show a commendable desire to perform their duties faithfully. It is too much to expect that relations with all these diversified elements will be entirely pleasant and harmonious, but with a sincere desire on both sides to do full duty to the Government, with an honest effort on the part of postmasters to get their accounts and vouchers in proper form and forward them promptly, these relations grow more satisfactory year by year. It is the present policy of this bureau that all official communications emanating therefrom shall be couched in courteous language, and that even the reproofs sometimes necessarily administered to those who are vexatiously careless and dilatory shall be in the least obnoxious form. To the splendid men who do their duty cheerfully and promptly no tribute of praise is too high, and the rewards they receive are usually inadequate.

THE BUREAU'S RELATIONS WITH MAIL CONTRACTORS.

All accounts for transportation of mails by railroads, steamships, steamboats, star routes, mail messenger, and special mail service are adjusted and reported for payment in the Auditor's office. These adjustments are made on data furnished by the Post-Office Department, which data it is still claimed by this Bureau are not sufficiently detailed to accomplish that independent scrutiny and audit which the law contemplates. But a more detailed examination would involve labor which can not be carried on in this Bureau without a considerable increase in clerical force assigned to that special work. Duplicate copies of all contracts for carrying the mails are filed in this Bureau. When accounts are found to be in accordance with contract they are stated to the Post-Office Department where warrants are issued for payment thereof. These warrants are countersigned in this Bureau; the accounts are reported to our bookkeeping division and entered in our ledgers, and the warrants are finally registered in the Treasury Department before transmission to the contractors by the Post-Office Department. The relations of the Auditor's Bureau to the contractors for carrying the mail are, therefore, less direct and intimate than those with postmasters, but are of such a nature as to involve voluminous correspondence relating to the adjustment of accounts, and entail much supervisory work, not over the execution of the contracts, but over the payments therefor. Recent wise changes in policy by the Post-Office Department to the effect that star-route contracts shall hereafter be granted only to residents of districts where the service is to be performed, promise great simplification of accounts through abolition of large numbers of subcontractors, and it is believed will prove a distinct gain to the public service.

The amounts paid by the United States Government for transport-

ing the mails by railways are now immense, and are steadily increasing. I repeat the statements of my former annual reports that, in my opinion, a correct and satisfactory settlement of these enormous accounts can only be made when this Bureau is furnished with all the information in possession of the Post-Office Department when the payments are authorized and certified to us. It is believed that no other Government expenditure aggregating so large an amount and involving so many possibilities of fraud and error is made practically on the single audit of the administrative branch of the service.

INCREASED FILE SPACE SECURED.

In pursuance of urgent representations made in last year's annual report, appropriation was made by Congress for the rent of an additional building to be devoted to storage and preservation of the surplus books and files of this Bureau in connection with those of other branches of the Treasury Department. The building was secured, and the space allotted suffices for our present requirements. Two years' accumulated money-order vouchers and bound statements were removed from the Department building where they had more than congested the available room. The new provision is only temporary, however, and its capacity will soon be exhausted. The requirement of ample space for our valuable accumulation of books and papers where they can be securely preserved, and be at all times readily accessible still further emphasizes, if additional emphasis were needed, the necessity for the long-contemplated Hall of Records at the seat of Government. Every Executive branch is interested in the safety and accessibility of innumerable priceless records and documents, the destruction of which under present circumstances annually inflicts irreparable loss on the public service.

ONE EVIL THAT SHOULD BE REMEDIED.

The fact that this Bureau is charged with the responsible duty of collecting balances due from the bondsmen of delinquent postmasters and conducting the varied forms of litigation incident thereto, as set forth in subsequent pages of this report, makes pertinent a suggestion looking to the remedy of an existing evil. The increasing frequency of post-office burglaries lends color to the belief that one of the great temptations to such burglaries is the convertibility of stamps thereby obtained into ready cash, through their easy sale at par or a small discount by the burglars and their agents. The use of stamps as currency was not contemplated by the Government when they were authorized, their only proper use being the prepayment of postage on matter conveyed in the mails. Postal regulations prohibit the exchange of one denomination for another, which would not be the case if they were to be used as currency. But they are now constantly employed in making small remittances, and their sale in large or small amounts is a flourishing industry in many cities. A market is thus created for stamps obtained by burglars from rifled post-offices; their prompt conversion into cash is assured and the chances for detection are greatly reduced. When a post-office is robbed the first impulse of the postmaster is to ask to be relieved from responsibility

for the loss of postage stamps, which he can always claim occurred through no negligence on his part. Within certain limits the Post-Office Department has the discretion to grant this relief. Outside that limit Congress must be appealed to, and the appeal is seldom made in vain. If all resources for relief fail and the postmaster is unable or unwilling to make good the loss, it becomes the duty of the Auditor to enter suit against his bondsmen for the amount involved. Much of this loss and trouble would be avoided if Congress should see fit to enact a law, which has often been proposed, restricting the private sale of postage stamps to amounts not exceeding $1. Facilities for purchasing stamps at post-offices, and at stations, substations, and authorized stamp agencies in cities are now so abundant as to preclude the necessity for their sale except in very small quantities for personal accommodation by druggists, etc. The proposition to limit the sale as suggested is well worth the attention of the law-making power. Besides operating in the manner indicated to discourage burglaries, it would also much more equitably adjust the salaries of postmasters based on the revenues of their respective offices. The receipts of many offices are unduly reduced by the sale at a discount within their jurisdictions, of postage stamps which have been either dishonestly obtained, or received through the mails as currency in direct opposition to the law's intent.

"NET REVENUES" OF POST-OFFICES.

Notwithstanding its manifest absurdity, the claim is still put forward in the public prints, on behalf of numerous cities, that their respective post-offices pay large "profits" to the Government. In support of this contention, the Auditor's report is quoted where, in Table 10, a certain amount is given in each case as "net revenues" of the office. But the term "net revenues" is very different from "profit." There can be no profit at any office so long as the aggregate business of the Department is conducted at a loss. Collections of revenues at local post-offices, consisting almost wholly of the sale of postage stamps, postal cards, etc., are not only obliged to pay the necessary expenditures of that office, but also to pay for the transportation of the mails to their destination and their delivery to the addressees. Because a large amount of mail happens to originate at the New York City post-office, for instance, entailing a correspondingly large sale of stamps and collections for newspaper postage, it does not necessarily follow that the New York office pays any profit whatever in the transaction. A railroad station would not be held to yield a "profit" simply because the amount of freight bills collected and passenger tickets sold at that station exceeded the salaries of its employees. A moment's reflection shows that in both cases the revenues must be earned outside the post-office or the railroad station and all the expenses incident thereto be paid before any "profit" whatever can be realized.

The revelations of Table 10 are very pertinent and useful, however, as showing the comparative economy of management between the various city post-offices of the country. Exceptional circumstances may exist in certain cities, but since the offices in all the larger ones are housed in Government buildings free of expense for rent, light, fuel, etc., it would seem that a somewhat uniform percentage of expendi-

tures to revenues would likely prevail among them, but the ten principal cities of the country show a percentage of expense to gross receipts varying as follows:

New York, N. Y	37	Cincinnati, Ohio	37
Chicago, Ill	36	Baltimore, Md	53
Philadelphia, Pa	47	San Francisco, Cal	49
Boston, Mass	46	Pittsburg, Pa	36
St. Louis, Mo	35	Cleveland, Ohio	38

From this statement it will be seen that Baltimore ranks highest among the principal cities for expenditures in the post-office, while St. Louis stands lowest. Assuming the service to be equally efficient and other conditions similar, this showing would seem to be highly complimentary to the management of the St. Louis office, and almost equally so to the others which nearly approach its standard in economy of administration.

ONE MEASURE OF BUSINESS ACTIVITY.

The increase of the postal revenues of the nation as a whole, and of the individual communities constituting the same, is popularly taken to be a correct indication of the prosperity of the country and the business activity of the people. Measured by this standard, the expansion of American commerce and industry has made gigantic strides during the past two decades. Letter postage has remained at a uniform rate since 1881. In that year the sales of postage stamps amounted to $0.67 per inhabitant, taking the whole country together. In 1890 they had increased to $0.95 per capita, and in 1901 to $1.33. These figures, taken in connection with the vast expansion of the postal service in every direction during the past century, as set forth in tabular statements attached to this report, are a gratifying testimonial, not only to our commercial and industrial progress, but to the unprecedented educational influence which is exerted through all regions and upon all the people through the universal intercommunication permitted by our postal system.

A COMPARATIVE STATEMENT OF POSTAL REVENUES.

The following table, embracing the 10 leading cities of the United States, will be found of interest for purposes of comparison. It shows the postal revenues for the two fiscal years ended June 30, 1900, and June 30, 1901, respectively, together with the population of each city according to the census of 1900:

Office.	Gross receipts.		Population, 1900.
	1901.	1900.	
New York, N. Y	$10,384,623.21	$9,481,289.56	3,437,202
Chicago, Ill	7,706,356.90	6,609,149.27	1,698,575
Philadelphia, Pa	3,698,501.10	3,396,685.07	1,293,697
Boston, Mass	3,317,274.39	3,185,872.89	560,892
St. Louis, Mo	2,145,068.70	1,924,425.80	575,238
Cincinnati, Ohio	1,370,035.36	1,239,986.62	325,902
Baltimore, Md	1,239,151.59	1,160,293.31	508,957
San Francisco, Cal	1,075,657.87	1,006,122.65	342,782
Pittsburg, Pa	1,030,533.41	923,601.13	321,616
Cleveland, Ohio	992,612.56	909,264.96	381,768

This comparison discloses that the increase in receipts for these 10 offices during the single year ended June 30, 1901, was $3,100,000, a sum greater than the total revenues of the postal service of the United States when the Auditor's office was established in 1836. It is a further noteworthy fact that two-sevenths of the entire present annual revenues accrue at the 10 offices enumerated above and that one-third of the gross increase of revenues for the fiscal year occurred therein.

ADVANCEMENT IN GRADE OF OFFICES.

Appended is a statement showing the number of post-offices advanced from the fourth to the Presidential class during the five years ended June 30, 1901, by reason of growth of business and corresponding increase of revenues, the standard being established by statute.

	1897.	1898.	1899.	1900.	1901.
July 1	37	19	23	37	47
October 1	53	32	50	68	52
January 1	48	33	95	124	115
April 1	20	25	27	40	36
Total	158	109	201	269	250

This total of 987 offices, thus advanced in class during the past five years, shows a gratifying growth among the flourishing towns of the country—a steady progress from village to town or city dignity, with the attendant increment of the features of a higher civilization.

INCREASED CLERICAL FORCE REQUIRED.

Almost every paragraph of this report and every page of the tabular statements connected therewith teems with arguments for a very marked increase in the clerical force of this Bureau. The growth of all departments of the postal service continues with unabated vigor, and the increase of the money-order business was so great during the fiscal year under review as to be absolutely phenomenal. Numerous important matters connected with our accounting system remain as heretofore untouched, because we can not take them up with our present force, and the branches which are and long have been attended to are each growing with a rapidity which demands additional help if the work is to be kept current.

About 3,000,000 more money-order vouchers were received and handled in this Bureau during the fiscal year ended June 30, 1901, than during its immediate predecessor. Since, as before stated, each of these vouchers must be handled five times by our employees, including the two comparisons with reports of issuing and paying postmasters, an actual addition of 15,000,000 manipulations has been superimposed on our already overwhelming mass of labor in these divisions. Everything else grows with a steadily augmenting ratio. It is manifest that we can not possibly keep abreast of this work, to say nothing of doing justice to neglected parts, without a corresponding increase in our battalion of workers. If our accounts get in arrears, temptations and opportunities for fraud, embezzlement, or defalcation multiply, and confusion is introduced into the varied channels of this great govern-

mental business enterprise. It is to be presumed that Congress does not contemplate such a state of affairs and that the appropriating authority will cheerfully make provision for all necessary extension of our force when the necessity therefor is clearly demonstrated.

I shall submit to the Department at once a careful estimate of our minimum needs for the fiscal year beginning July 1, 1902, and will stand ready when called upon to demonstrate by incontrovertible facts the necessity for the additional help therein requested.

THE DISBURSING CLERK'S REPORT.

The transactions of the disbursing clerk during the fiscal year are presented in the statement below. The disbursing clerk, being the only bonded officer attached to this bureau, is charged not only with the duty of paying salaries to our employees, but he is also required to receive and account for all registered packages and all remittances of money which reach the bureau in whatever manner or from whatever source. Although postal laws and regulations prohibit money remittances from being sent here, many careless or ignorant postmasters persist in sending money with their statements instead of depositing it as required by law and their instructions. The responsibility of caring for this money and the labor of correcting these errors constitute a large portion of the work of the disbursing clerk. The amount thus received shows a marked reduction year by year as postmasters become more familiar with their duties and amenable to proper instruction. The statement is as follows:

Appropriation, "Salaries office of Auditor for Post-Office Department"	$594,680.00	
Salaries, temporary clerks, act of March 3, 1901	3,600.00	
	598,280.00	
Amount of appropriation not covered by warrants of the Secretary	2,180.00	
Amount of appropriation drawn on warrants of the Secretary		$596,100.00
Disbursed as follows:		
1900, third quarter	147,189.48	
1900, fourth quarter	147,363.92	
1901, first quarter	149,022.76	
1901, second quarter	151,033.19	
	594,609.35	
Deposited with Treasurer of the United States	1,490.65	
		596,100.00
Amount of appropriation unexpended		3,670.65
Deductions in salary on account of excessive leave	1,098.71	
Difference resulting from "Leave without pay, lapses," etc.	2,571.94	
		3,670.65
Number of registered packages received, 4,054, value		17,216.79
Postal funds deposited with Treasurer of the United States	10,226.08	
Money-order funds deposited with postmaster, Washington, D. C	3,563.13	
Number of registered packages returned to postmasters and others, 290, value	3,427.58	
		17,216.79

INVALID MONEY ORDERS.

The First Assistant Postmaster-General reports to this office that the amount of domestic money orders remaining unpaid for one year from the last day of month of issue during the fiscal year ended June 30, 1901, was $88,678.06. This amount is nearly double that of the corresponding item for the previous year. The figures are gathered from the advices and postmasters' monthly statements transmitted to the Post-Office Department. These advices, under the act of January, 1894 (Stat. L., p. 32, sec. 4), should have been sent by postmasters to the Auditor. That law requires the Auditor to certify to the Postmaster-General the amount of invalid orders outstanding, as shown by such advices, and also requires that the sum thus certified be turned into the Treasury by the Postmaster-General to be used as current revenues by the Department. I have in preceding annual reports called attention to the fact that this law is disregarded, notwithstanding repeated requests that it be complied with. Until that is done, and a register of advices can be made up in this office, we can not properly certify to the validity of claims for payments of money orders more than seven years old, since the laws require the destruction each year of all statements and guard books pertaining thereto. Thus every record of a money order outstanding beyond that period is destroyed; yet such orders are constantly presented for redemption by warrant. As an accounting officer can not legally certify to financial statements which he can not verify, this office is not in position to make such certificates unless the advices of invalid orders are transmitted to the Auditor, as plainly required by law. For the hardships thereby entailed we can not be held responsible.

During the fiscal year 537 cases of double payments, amounting to $2,029.17, were referred to postmasters for correction.

A DEFECT IN MONEY-ORDER ACCOUNTING.

Attention is again called to one particular in which our accounting method is seriously defective. At least $75,000,000 money-order funds are, by the present accounting system, at all times nominally in the hands of postmasters unaccounted for. The postmaster who sells money orders transmits to this office his report of such sales weekly, semimonthly, or monthly, as the case may be. These reports are necessarily held here for a period averaging five months before the money orders which constitute vouchers verifying the amount of the postmasters' receipts can be assembled from all parts of the world, assorted by States, towns, and numbers, and then checked against the report. Not until all this time has elapsed and all this work has been done can we ascertain whether the postmaster has accounted for all his receipts. Meantime there is abundant opportunity to the dishonest for heavy embezzlements, which in fact are constantly occurring. No banking business could be carried on successfully in this loose manner. An additional safeguard would consist in requiring each postmaster to send a daily statement to this office, showing in brief his cash receipts from the sale of money orders during that day and his disposition of the same. These statements would here be posted and afterwards verified as soon as possible by the regular reports sent in. While this would not be a perfect protection against loss it would be a long

step in that direction, since it would unquestionably have a restrictive influence on dishonest officials. It would enable this office to detect fraudulent variations between the daily statements and subsequent full reports, and it would be otherwise beneficial to the service. A large additional force would be required to properly receive, enter, and verify these statements, but the Government, having engaged in this business, owes to itself the adoption of every possible precaution.

LIMIT TO LIFE OF MONEY ORDERS.

I feel constrained to repeat recommendations submitted in previous annual reports, that legislation be secured limiting the life of money orders to three months from the last day of the month of issue instead of twelve months, as now required by law. This procedure, with the transmittal of all invalid advices to the Auditor, in obedience to present legal requirements, would render possible a correct and practically current audit of money-order accounts, thereby greatly reducing the risks referred to in the preceding paragraph. Under the form of money orders now in use the advice is a facsimile of the orginal order as issued, and might be used in checking debit entries of missing orders. Since the order has not been and can no longer be presented for payment, unless the advice is sent to the Auditor, the entry of the order on the debit side of a money-order statement must always remain unverified. The average life of a money order, as determined by a recent investigation in this Bureau, is seven and one-half days. It is manifest from this that no injury could be caused to the money-order system by limiting the legal life to three months, as above suggested. Congress might relieve this office of one of its greatest elements of embarrassment in adjusting money-order accounts by complying with this oft-repeated recommendation.

IMPROPER PAYMENT OF MONEY ORDERS BY POSTMASTERS.

On April 3, 1901, I reported to the Comptroller of the Treasury for approval, disapproval, or modification, under the provisions of section 8, act approved July 31, 1894, a decision that the practice of allowing money orders to be paid at offices other than those on which they had been drawn was contrary to the provisions of law establishing the money-order system, and that vouchers issued, in lieu of orders thus improperly paid, by the Superintendent of the Money-Order Division of the Post-Office Department, could not be accepted as authoritative warrants for the disbursement of public money, or credit allowed to the postmasters transmitting the same. The reasons for my decision were stated at length, and are incorporated in the printed reports of the Decisions of the Comptroller of the Treasury, July, 1900, to June, 1901, Vol. VII, page 678 et seq. April 25, 1901, the Comptroller filed his decision, concurring fully with my opinion, thereby placing an effectual barrier to the continuance of this practice. The Comptroller's decision laid down two principles stated in the syllabus thereof, as follows:

> The provisions in the act of March 1, 1899, which authorizes the Superintendent of the Money-Order System to draw money orders for the purpose of correcting errors made by postmasters in issuing or paying such orders does not authorize him to draw such orders for the purpose of facilitating the payment of other money orders by a postmaster other than the postmaster upon whom they were drawn.

The various provisions of law relating to the issue and payment of domestic postal money orders must be considered as providing that such orders shall be paid only by the postmasters upon whom they are respectively drawn.

This decision of the Comptroller was at once made known to the Post-Office Department and the First Assistant Postmaster-General promptly issued an order withdrawing the permission previously given for making such payments. Thus the practice was restored to the conditions which prevailed before that questionable policy was inaugurated.

INTERNATIONAL ACCOUNTS.

Paragraph V of Article IV of the Postal Union Convention of Washington provides that for the years 1901 and 1902 the maritime transit charge of 14 francs shall be reduced to 12 francs per kilogram for the intermediary conveyance of foreign correspondence within the limits of the Union, the transit to be divided pro rata between the administrations participating in the conveyance. In accordance with this provision of the regulations the rates of transit chargeable for the sea conveyance of foreign mails have been modified and the accounts pertaining to this branch of the service prepared and, for the most part, transmitted to those countries which have signified an intention of making use of the intermediary services of this Department for the period mentioned.

The aggregate amount of balances now due and outstanding for intermediary service rendered to other countries is $40,107.61, as against $59,404.78 due to the United States for this service up to December 31, 1900, the Government of Venezuela having, in the meantime, arranged for the liquidation of the balance which had accrued during prior years for the conveyance of correspondence originating in that country.

After the year 1902 the maximum charge for maritime service can not exceed 10 francs per kilogram for the intermediary conveyance of correspondence anywhere within the limits of the Union, which rate is to remain fixed at that figure until the assembling of the next international congress, when it is probable that the transit now exacted for this service will either be entirely abolished or averaged rates established at reduced figures which shall be maintained during the intervals of time between each succeeding congress.

The amount paid by the United States during the year 1900 for the intermediary conveyance of mails was—

	Francs.	
For territorial transit	751,238.34	
For maritime and extraordinary land transit	268,912.98	
Total	1,020,151.32	or $196,889.20

The amount received from foreign countries during the year was—

	Francs.	
For maritime transit	451,445.11	
For extraordinary land transit	318,367.87	
Total	769,812.98	or 148,573.91
Excess paid to foreign countries		48,315.29

The foregoing figures clearly demonstrate that the abolition of the maritime transit by the next International Postal Congress would be detrimental to the United States, from a financial point of view, unless,

at the same time, a material reduction should be made in the territorial rates now prevailing; otherwise the balance required to be paid to foreign countries annually would be more than doubled, bringing it up to $109,760.30, as against $48,315.29 paid under present conditions. The foregoing figures are relative only when considered with reference to the present year and 1902, as, under the terms of the Washington convention, a reduction of both territorial and maritime transit was provided for those years. Moreover, as the last postal congress made provision for the discontinuance of the collection of the triennial statistics as a means of settlement of transit expenses and substituted therefor the statistics of May, 1896, to be used as a permanent basis of adjustment, there is at the present no immediate necessity for the discontinuance of the sea-transit charge, the grounds of opposition to it having been based almost wholly upon the difficulties surrounding the collection of statistical information by which the various countries were enabled to formulate their respective accounts for the expenses of intermediary service. This process was so full of difficulty, and so unsatisfactory both to the debtor and creditor country, that the abolition of the triennial statistics and the substitution of other means of settlement formed one of the principal topics of discussion in the convention held at Washington in 1897, and finally resulted in the present method of settlement by which, as before stated, the objectionable triennial statistics were abolished.

It may be, perhaps, idle to speculate as to what disposition will be made of the question of intermediary transit, both territorial and maritime, by the next international congress—a question which will receive the early and earnest attention of the assembled delegates—but it is plainly in evidence that a strong contingent will be ready to vote for the abolition of both. The free distribution of the mails throughout the territory of the Universal Postal Union was the dream of the leading spirits who originated and carried to a successful conclusion the organization of practically all the countries of the world into one vast postal territory. The realization of this dream will, however, not be reached at the meeting of the next international congress, as the interests of the several administrations there represented will be so diverse and conflicting that a decision favorable to the hopes of those advocating the principle of free transit throughout the limits of the Union will have to be postponed to a later date for final solution, but that it will be consummated in the future appears to be certain.

The manifest advantages and convenience to the general public, and particularly to commercial and business interests, which a uniform rate of postage applicable alike both to foreign and domestic correspondence, when generally known and understood (as it is sure to be sooner or later), will create such a demand for this privilege that representatives to future international congresses will be compelled to provide means for its adoption, notwithstanding the difficulties to be overcome.

This would mean primarily the discontinuance of all, or nearly all, of the intermediary transit charges and a considerable reduction in the rates now paid for the ocean transportation of foreign mails, which together could doubtless be made to cover the loss of postal revenue to the several countries of the Union caused by the reduction of postage on foreign correspondence to the domestic rates; for it is hardly

probable that such a measure could be carried through the Congress, unless at the same time means were adopted to protect the postal revenue, which is usually the predominant thought among postal officials when considering changes in the transaction of postal business.

INTERNATIONAL MONEY-ORDER EXCHANGE.

On July 1, 1901, an entirely new system of exchange of international money orders between the United States and Canada, Cuba, and the Philippine Archipelago was put into operation by the Department.

This recently adopted method of international exchange of money orders is practically an extension of the domestic system to the countries named above. In making remittances the regulation domestic forms are used, and settlements of the international accounts are based upon the value of the orders paid by each country for the other. A similar method of exchange has been in operation between France and Canada for the past ten years, and is pronounced by those countries a success in every way, so that it can not be considered as in an experimental stage.

Postmasters issuing orders on Canada, Cuba, or the Philippines debit themselves in their money-order statements in the same manner and form as in the case of domestic orders. The advices are sent direct to the office of payment, and the remitter sends his order to the person who is to receive the money. As the issuing and paying offices deal directly with each other, the circumlocution and delay incident to the employment of an exchange office as a medium of communication are avoided.

Decidedly the most important result attained by the Department in adopting the new scheme of exchange was the discontinuance of the cumbersome exchange office, with its manifold details and bulky records, and the substitution therefor of a system by which the adjustment of the money-order accounts between the administrations interested is based upon the actual amount of money paid by one country for the other. The adjustment of the international accounts on the basis of the value of orders paid, respectively, by one country for the other is the only true basis of settlement of this class of accounts, as the creditor country can claim from the other the exact value of the orders it has cashed during a given period, and no more. Every item of credit claimed in an account must be covered by a voucher in the form of a receipted money order, which must accompany the account in which the credit is claimed. Under the system of international exchange in vogue with most countries each administration is credited with the value of all orders certified to it, without regard to the question of a subsequent payment, and there are no means at hand of determining absolutely, except upon special inquiry, whether every order certified in a list has been paid, because of the uncertainty as to whether all of the details prescribed in the various conventions have been fully carried out; and as the execution of these details depends upon the action of several individuals acting independently of one another, it is more than probable that in some instances orders drawn by one country on another remain unpaid and also uncredited to the country of origin, and just to that extent the method of settlement on the value of orders certified is defective. The relative loss or gain to either country would depend upon the efficiency of the measures employed by either to carry

out that provision of the convention governing the treatment and disposition of void orders. But under the new system the country of issue retains possession of the funds received from the sale of its orders payable in a foreign country until the orders themselves are paid, receipted, and presented for redemption, and consequently it is not necessary to await the action of the country in which the orders are payable in order to control the funds due on outstanding orders.

Credit for the payment of Canadian, Cuban, or Philippine orders is claimed by postmasters in their money-order statements in the same manner as domestic orders. They are received here by the inspecting division and checked against the credits for their payment claimed in the postmasters' accounts. The orders are then sent to the foreign division, where they are arranged numerically according to offices of issue and listed on forms prepared for the purpose, giving the name of office where issued, and number and amount of each order received. The several sheets are then footed and the total of each carried to a summary or recapitulation sheet, which shows the aggregate value of all orders drawn on the United States by the country in interest—that is, Canada, Cuba, or the Philippines, as the case may be—and paid during a given period. This list or account, together with the paid orders described therein, is transmitted under registered cover to the country in which the orders were issued and credit for the total value on the orders duly claimed. On the other hand, orders issued in the United States on Canada, Cuba, etc., are likewise similarly scheduled and sent to this office with a claim for a credit for the aggregate value of United States orders paid, and after the orders have been carefully checked and the aggregate value found correct they are then transferred to the assorting and checking division, where they are again compared and checked against the amounts with which the issuing postmasters debited themselves in their money-order statements.

After verification of the orders with the accounts of the office of issue they are filed with the domestic orders in the sequence of number. The auditing of the accounts under the new system appears to be exceedingly simple and free from complications, and yet it is decidedly effective and complete. Credit is allowed only on our own orders when duly receipted and presented for redemption by the country which paid them, and they are again checked against the account of the postmaster by whom they were issued, thus making it reasonably certain that credit for the amount allowed on the order to the foreign country is fully covered by a corresponding debit in the account of the postmaster who sold the order.

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Respectfully,

HENRY A. CASTLE, *Auditor.*

The SECRETARY OF THE TREASURY.

REPORT

OF

THE ATTORNEY-GENERAL.

DEPARTMENT OF JUSTICE,
Washington, D. C., November 30, 1901.

To the Senate and House of Representatives of the United States of America in Congress assembled:

I have the honor to submit the following report of business transacted by the Department of Justice for the last preceding fiscal year and of other matters appertaining thereto, as required by law:

SUPREME COURT.

The accompanying table shows the result of last year's work of the Supreme Court of the United States, so far as the number of cases can show it. There was an increase of 31 in the number of cases docketed on the appellate docket, and a decrease of 3 in the number disposed of, the number remaining having been increased thereby from 303 to 336.

	Appellate docket—October term.										
	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.
Cases at close of previous term not disposed of	1,177	1,190	1,073	934	714	640	533	383	313	304	303
Cases docketed at the term	623	379	275	280	332	382	284	302	520	370	401
Total	1,800	1,569	1,348	1,214	1,046	1,022	817	685	833	674	704
Cases disposed of at the term	610	496	414	500	406	489	434	372	529	371	368
Cases remaining undisposed of	1,190	1,073	934	714	640	533	383	313	304	303	336

The appellate docket at the close of the last term shows an increase of 33 cases since the close of the preceding term. At the close of the October term, 1899, there remained undisposed of on the appellate docket 303 cases, and upon the original docket 14 cases, making a total of 317. The number of cases docketed at the October term, 1900, was 406, 401 of which were on the appellate docket and 5 on the original docket, which, with the 14 cases pending on the original

docket, make the total number of cases pending at that term 723, of which 704 were on the appellate and 19 on the original docket. Of this number 377 were disposed of during the October term, 1900, of which 368 were on the appellate and 9 on the original docket, leaving undisposed of at the close of the October term, 1900, 346 cases, of which 336 were on the appellate and 10 on the original docket.

The number of cases actually considered by the court was 368, of which 179 were argued orally and 152 submitted on printed arguments. Of the 368 appellate cases disposed of, 132 were affirmed, 57 reversed, 57 dismissed, 24 settled by the parties and dismissed; in 9, questions certified were answered, and 89 were denials of petitions for writs of certiorari under the act of March 3, 1891.

The total number of cases on the appellate docket in which the United States was a party or had a substantial interest disposed of at the October term, 1900, was 75. The United States was appellant, etc., in 21 of these cases and appellee, etc., in 54.

Of the 21 cases appealed, etc., by the Government, 7 were decided in its favor and 4 adversely, in 3 the decrees were modified, 2 cases were dismissed by it, and 5 were denials of petitions for writs of certiorari.

Of the 54 cases in which the Government was appellee, etc., 23 were determined in its favor and 7 adversely, 2 were dismissed by the appellant, 3 were dismissed by the court for failure of the appellant, etc., to comply with the rules, 1 was docketed and dismissed, and 3 were dismissed by the court, 2 were dismissed per stipulation, and 13 were denials of petitions for writs of certiorari.

Of the above 75 cases, 16 were appeals from the Court of Claims, of which 4 were taken by the Government. Of the 4 cases so appealed, 2 were decided in favor of the Government and 2 adversely, while of the 12 cases in which it was appellee, 9 were decided in its favor, 2 adversely, and 1 docketed and dismissed.

Of the 75 cases disposed of, 15 were criminal, 4 of which were capital. Of these, 13 were decided in favor of the United States and 2 adversely, 1 of the latter being a capital case.

Six cases were appeals, etc., from the circuit court of appeals, of which 1 was decided in favor of and 1 against the United States, 1 was dismissed by the court for want of jurisdiction, and in 3 cases the decrees were modified.

Four cases were from the Court of Private Land Claims, all of which were appealed by the other side. Of these, 2 were decided in its favor, 1 dismissed per stipulation, and 1 dismissed by the court for noncompliance with the rules.

The United States was petitioner in 4 petitions for writs of certiorari under the act of March 3, 1891, and respondent in 13, all of which were denied, and in 3 petitions for certiorari to the court of appeals of

the District of Columbia, 2 of which were in capital cases, all of which were denied.

Of the whole number of cases in which the Government had a substantial interest heard and decided by the court, 30 were decided in its favor, 3 in part for the United States, and 11 against the United States.

In addition to the above, in 4 original cases the United States instituted proceedings against four States in accordance with the provisions of section 4 of the act of March 3, 1899 (30 Stats., 1356), to recover the principal and interest of certain bonds, which suits were, in accordance with the provisions of the act of June 6, 1900 (31 Stats., 612), dismissed by the Government.

In 2 cases petitions on behalf of the District of Columbia for writs of mandamus were denied. In addition 1 case was a denial of leave to file a petition for a writ of habeas corpus; 1 case an application for leave to file a petition for writs of mandamus and certiorari; 1 a petition for a common-law writ of certiorari; and 1 case an application for leave to file a petition for a writ of mandamus. The United States was respondent in each of these 4 cases, in all of which the petitions were denied.

Among the many cases heard and decided by the Supreme Court of the United States during the October term, 1900, the following are the more important:

Hubbell v. United States. (179 U. S., 77.)

[No. 19. Argued January 9, 10, 1899. Decided October 22, 1900.]

This was a case originally brought in the Court of Claims against the United States for compensation for the use of cartridges alleged to be covered by Hubbell's patent. The finding of the court is sufficiently set forth in the syllabus:

> An examination of the history of the appellant's claim shows that in order to get his patent he was compelled to accept one with a narrower claim than that contained in his original application; and it is well settled that the claim as allowed must be read and interpreted with reference to the rejected claim and to the prior state of the art, and can not be so construed as to cover either what was rejected by the Patent Office, or disclosed by prior devices.
>
> This court concurs with the court below in holding that the cartridges made and used by the United States were not within the description contained in the appellant's claim.

Good Shot v. United States. (179 U. S., 87.)

[No. 447. Submitted October 22, 1900. Decided October 29, 1900.]

In this case the court held, following the decision in *Fitzpatrick* v. *The United States* (178 U. S., 304), that a conviction for murder, punishable with death, was none the less a conviction for a capital

crime, although the jury qualified their verdict so as to make the punishment imprisonment for life; and therefore, since the Supreme Court had jurisdiction, the circuit court of appeals did not. The syllabus is as follows:

> A circuit court of appeals has no jurisdiction to review upon writ of error the trial, judgment, and sentence of an Indian to imprisonment for life founded upon a verdict rendered on a trial of an indictment of the Indian for murder, by which verdict the jury find the defendant "guilty as charged in the indictment, without capital punishment."

In re Vidal.

[No number. Submitted April 23, 1900. Decided November 12, 1900.]

This was an application for leave to file a petition for certiorari to review the proceedings of the provisional court, established by the military government of Porto Rico, in a quo warranto proceeding to oust Vidal and others from the municipal offices of the town of Guayama. The court denied the application for the reason stated in the syllabus:

> Section 719, Revised Statutes, does not empower this court to review the proceedings of military tribunals by certiorari.
>
> The act of April 12, 1900, chapter 191, having discontinued the tribunal established under that act and created a successor authorized to take possession of its records and to take jurisdiction of all cases and proceedings pending therein, this court has no jurisdiction to review its proceedings.
>
> Such tribunals are not courts with jurisdiction in law or equity within the meaning of those terms as used in Article III of the Constitution.

United States v. Andrews. (179 U. S., 96.)

[No. 423. Submitted October 15, 1900. Decided November 5, 1900.]

The case and its result are sufficiently set forth in the syllabus:

> By the treaty with the Kiowa and Comanche Indians of August, 1868, the Indians agreed not to attack any persons at home or traveling, and not to molest any persons at home or traveling, or molest any wagon trains, coaches, mules, or cattle belonging to the people of the United States, or persons friendly therewith; and the United States agreed that no persons except those authorized by the treaty to do so, and officers, etc., of the Government, should be permitted to pass over the Indian territory described in the treaty. In 1877 Andrews passed over the territory with a large number of cattle, traveling over the Chisholm trail, the same being an established trail en route from Texas to a market in Kansas. He being convicted on trial for a violation of the treaty, appeal was taken to this court. *Held:* (1) That the finding of the court below was equivalent to a finding that the trail was a lawfully established trail permitted by the laws of the United States; (2) that as the plaintiff was lawfully within the territory he was not a trespasser at the time his property was taken.

Fritz Contzen v. United States. (179 U. S., 191.)

[No. 84. Submitted November 7, 1900. Decided December 3, 1900.]

This was a suit brought against the Government under the Indian depredations act. The petitioner was born in Germany in 1831, emigrated to Texas in 1845, and was there when it was admitted into the Union December 29, 1845. Since its admission he had resided continuously in the United States. The interesting question related to his citizenship. The court held he was not a citizen.

> Texas was an independent State when admitted into the Union, and the effect of the admission was to make its citizens citizens of the United States. But those who at that time could only become citizens by naturalization were thereupon relegated to the laws of the United States in that behalf.
>
> Minor aliens in Texas, separated from their parents, were not made citizens of the United States by the admission, and in order to become such were obliged to comply with the requirements of the laws of the United States.
>
> As appellant was a German subject and not a citizen of Texas when Texas became one of the United States, and had not been naturalized when the injury complained of was inflicted, the Court of Claims was right in dismissing his petition for want of jurisdiction.

Scranton v. Wheeler. (179 U. S., 141.)

[No. 9. Argued October 16, 1899. Decided November 12, 1900.]

The Government, in the improvement of navigation, erected a pier on submerged ground in front of the premises of Scranton in the St. Marys River, Michigan. This cut off Scranton's access to the water, and he brought a suit against Wheeler, who, as superintendent, was in control of the pier and the canal as an agent of the Government. The court held that Scranton had no cause of action against the Government or its agent by reason of the improvement, the reasons being as follows:

> The prohibition in the Constitution of the United States of the taking of private property for public use without just compensation has no application to the case of an owner of land bordering on a public navigable river, whose access from his land to navigability is permanently lost by reason of the construction, under authority of Congress, of a pier resting on submerged lands away from but in front of his upland, and which pier was erected by the United States, not with any intent to impair the right of riparian owners, but for the purpose only of improving the navigation of such river.
>
> It was not intended by that provision of the Constitution that the paramount authority of Congress to improve the navigation of the public waters of the United States should be crippled by compelling the Government to make compensation for an injury

to a riparian owner's right of access to navigability that might incidentally result from an improvement ordered by Congress.

The State courts of Michigan having recognized this action as a proper one under the laws of that State for the relief sought by the plaintiff, this court has jurisdiction to consider the question of a Federal nature decided herein.

United States v. Choctaw Nation and Chickasaw Nation. (179 U. S., 494.)

Wichita and Affiliated Bands of Indians v. Choctaw Nation, Chickasaw Nation, and United States.

Choctaw Nation and Chickasaw Nation v. United States and Wichita and Affiliated Bands of Indians.

[Nos. 88, 89, 90. Argued March 7, 8, 9, 1900. Decided December 10, 1900.]

The nature of these suits, with the decisions of the court, are stated in the syllabus as follows:

On the 4th day of June, 1891, the United States and the Wichita and Affiliated Bands of Indians entered into an agreement whereby the Indians ceded to the United States a tract of land which is described in the opinion of the court in this case, and the United States agreed in consideration thereof that out of the territory so ceded there should be allotted to each member of the Wichita and Affiliated Bands of Indians in the Indian Territory, native and adopted, 160 acres of land in the manner and form described in the agreement. This agreement was ratified by the Indian appropriations act of March 2, 1895, which further conferred jurisdiction upon the Court of Claims to hear and determine the claim of the Choctaws and the Chickasaws to a right, title, and interest in the lands so ceded, and to render judgment thereon, with a right of appeal to this court. Pursuant to that act this suit was brought. The Court of Claims, after reciting that the lands in dispute were acquired by the United States "in trust for the settlement of Indians thereon, and in trust and for the benefit of said claimant Indians when the aforesaid trust shall cease;" that "the Wichita and Affiliated Bands of Indians were by the United States located within the boundaries of the lands hereinbefore described;" that they "now number not more than 1,060 persons," and that the location of the Wichitas and Affiliated Bands within said boundaries was "for the purpose of affording them permanent settlement therein," adjudged that the lands in dispute had been acquired and were held by the United States in trust for the purpose of settling Indians thereon, and that whenever that purpose was abandoned as to the whole or any part thereof then all the lands not so devoted to Indian settlement should be held in trust by the United States for the Choctaw and Chickasaw Indians exclusively. It was also adjudged that the members of the Wichita and affiliated bands, not exceeding 1,060, were equitably entitled to 160 acres of land each out of the lands in dispute and that the same should be set apart to them by the United States, due regard being had to any improvements made thereon by them, respectively, for their permanent settlement. It was further adjudged

that the Choctaw and Chickasaw nations were in law and equity entitled to and were the owners of such of the lands ceded to the United States by the Wichita and affiliated bands as remained, after satisfying the provisions for the Wichita and affiliated bands, and that in the event of the sale thereof by the United States, the Indian plaintiffs should be entitled to and receive the proceeds of such sale. This judgment being brought here on appeal, this court, in its opinion, carefully reviewed all the legislation, and all the Indian treaties on the subject, and, as a result, held that for the reasons given the decree must be reversed with directions to dismiss the petition of the Choctaw and Chickasaw Nations, and to make a decree in behalf of the Wichita and affiliated bands of Indians, fixing the amount of compensation to be made to them on account of such lands in the Wichita Reservation as are not needed in order to meet the requirements of the act of Congress of March 2, 1895, c. 188, and for such further proceedings as may be consistent with law and with this opinion.

Rothschild v. United States. (179 U. S., 463.)

[No. 59. Argued October 31, November 1, 1900. Decided December 17, 1900.]

In this case the court construed certain provisions of the Dingley law fixing duties on imported tobacco.

It is the meaning of the tariff act of July 24, 1897, to subject to different rates of duty the leaves of tobacco suitable for cigar wrappers and those not suitable when mixed in the same commercial bale or package.

It is the meaning of said act to subject to the duty of $1.85 per pound the leaves of tobacco suitable for cigar wrappers intermingled in the bales or packages of tobacco (unstemmed) of the description which in their entirety, at the date of the enactment, were commercially known in this country as "filler tobacco," and bought and sold by that name, notwithstanding such leaves constitute less than 15 per cent of the contents.

United States v. Morrison. (179 U. S., 456.)

United States v. Wolff.

[Nos. 15, 16. Argued December 12, 1899. Decided December 17, 1900.]

These cases and the result are described in the syllabus:

These cases are concerned with the classification of certain articles imported by the respondents under the tariff act of 1890. Those imported by E. A. Morrison & Son were variously colored in imitation of "cat's eyes" or "tiger's eyes," and were strung. Others were colored in resemblance to the garnet, aquamarine, moonstone, and topaz. Those imported by Wolff & Co. were in imitation of pearls, it is claimed, and were also strung. The contention is as to how they shall be classified or made dutiable—whether under paragraph 108 or under paragraph 454 of the act of 1890.

Held, that if the act of 1890 did not as specifically provide for beads as prior acts, glass beads as such were in the legislative mind and their various conditions contemplated. It was impossible to have in contemplation glass beads, loose, unthreaded, and unstrung (445), and not have the exact opposite in contemplation—beads not loose, beads threaded and strung, and made provision for them. What provision? Were they to be dutiable at the same or at a higher rate than beads unthreaded or unstrung? If at the same rate—if all beads were to be dutiable at the same rate—why have qualified any of them? Were some to be dutiable at one rate and some at another rate? If made of plain glass, were they to be dutiable at 60 per centum under paragraph 108? If tinted or made to the color of some precious stone, were they to dutiable at 10 per centum under paragraph 454? No reason is assigned for such discrimination, and we are not disposed to infer it. It is a more reasonable inference that beads threaded of all kinds were intended to be dutiable at a higher rate than beads unthreaded, and if there can be a choice of provisions that intention must determine. Indeed, admitting that either provision (paragraph 108 or paragraph 454) equally applied, the statute prescribed the rule to be that "if two or more rates of duty shall be applicable to any imported article, it shall pay duty at the highest of such rates."

In re De Bara, petitioner. (179 U. S., 316.)

[No. 15. Original. Submitted November 5, 1900. Decided December 3, 1900.]

The petitioner was convicted of violating section 5480, which prohibits the use of the mails for fraudulent purposes, and was given a sentence of three years, although the maximum punishment provided by the section was eighteen months. Having served eighteen months he sued out a writ of habeas corpus to secure his release, but the court held:

Under section 5480 of the Revised Statutes of the United States the court below had the power to give a single sentence for several offenses in excess of that which is prescribed for one officer. *In re Henry* (123 U. S., 372), affirmed and followed to this point.

Arkansas v. Schlierholz (179 U. S., 598).

[No. 122. Argued and submitted December 6, 1900. Decided December 24, 1900.]

Schlierholz, an agent of the General Land Office, seized certain timber which he claimed to be the property of the Government. For this he was indicted in Arkansas and arrested. To secure his release a writ of habeas corpus was sued out in the United States district court. The court finding that Schlierholz was in the discharge of his duty as a Government officer, discharged him. An appeal was taken to the United States circuit court of appeals and certain questions cer-

tified to the Supreme Court, which dismissed the case for want of jurisdiction on the following grounds:

> The authority of this court to review the action of the court below in this case must be found in one of three classes of cases, in which, by section 5 of the judiciary act of March 3, 1891, an appeal or writ of error may be taken from a district or circuit court direct to this court. The classes of cases alluded to are as follows: (1) Cases in which the jurisdiction of the court is in issue, in which class of cases the question of jurisdiction alone is to be certified from the court below for decision; (2) cases involving the construction or application of the Constitution of the United States; and (3) cases in which the constitutionality of any law of the United States, or the validity or construction of any treaty made under its authority, is drawn in question. The court is of opinion that the case at bar is not embraced within either of those classes of cases.

Neely v. Henkel [No. 1]. (180 U. S., 109.)

[No. 387. Argued December 10, 11, 1900. Decided January 14, 1901.]

These cases primarily involved the right of the Government to extradite a citizen upon probable cause being shown that he had fled from the island of Cuba to avoid trial for an alleged embezzlement by him of the funds of the Cuban department of posts. Incidentally, however, the constitutional powers of the United States for the temporary government of Cuba were called into question and passed upon by the court, which authoritatively defined the status of the island and its present relations to the United States.

Neely was the finance agent of the department of posts of the island of Cuba, under appointment of this Government during its temporary control of the island. It was alleged that on or about May 6, 1900, he embezzled $57,000 in violation of its penal code. Congress on June 6, 1900, passed a law to authorize the extradition of fugitives from justice from a foreign country or territory which was "occupied by or under the control of the United States." Under authority of this act a warrant was issued for Neely's arrest by Judge Lacombe, of the circuit court of the United States for the southern district of New York, and Neely was arrested. After a hearing, Judge Lacombe committed Neely pending an order of extradition, and thereupon Neely sued out a writ of habeas corpus, the denial of which was the subject of appeal to the Supreme Court.

Counsel for Neely claimed his discharge on the following grounds:

(1) That as the United States was exercising legislative, judicial, and executive powers in Cuba it had ceased to be foreign territory, and the act of June 6, 1900, which referred to "foreign territory" did not apply.

(2) That as a principle of international law there could be no extra-

dition in the absence of a treaty between the extraditing and the demanding countries.

(3) That the act of June 6, 1900, if applicable, was unconstitutional, inasmuch as it did not secure to the accused all of the rights, privileges, and immunities that are guaranteed by the Constitution to persons charged with the commission of crime.

(4) That inasmuch as Congress, by the joint resolution of April 28, 1898, declared that "the people of Cuba are, and of right ought to be, free and independent," such resolution was a legal and binding recognition of the existence of a Cuban republic, and as a treaty of peace had been definitively executed, the subsequent occupancy and control of the island under the authority of the United States was without warrant of the Constitution and an unauthorized interference with the internal affairs of a friendly power.

The validity of our temporary occupancy of the island of Cuba, and all acts done thereunder, was directly challenged.

The Supreme Court negatived each of these contentions, and in the amplest manner sustained the authority of the United States.

The court, in defining the status of Cuba as that of "foreign territory," said that it "can not be regarded in any constitutional, legal, or international sense a part of the territory of the United States." It fully sustained the authority of the United States to temporarily govern it, pending the establishment of a stable government by the Cuban people. The court say (p. 120):

> The occupancy of the island by troops of the United States was the necessary result of the war. That result could not have been avoided by the United States consistently with the principles of international law or with its obligations to the people of Cuba.
>
> It is true that as between Spain and the United States—indeed, as between the United States and all foreign nations—Cuba, upon the cessation of hostilities with Spain and after the treaty of Paris was to be treated as if it were conquered territory. But as between the United States and Cuba that island is territory held in trust for the inhabitants of Cuba, to whom it rightfully belongs and to whose exclusive control it will be surrendered when a stable government shall have been established by their voluntary action.

As to the power of the United States to govern the island temporarily, the court say (page 121):

> It can not be doubted that when the United States enforced the relinquishment by Spain of her sovereignty in Cuba and determined to occupy and control that island until there was complete tranquillity in all its borders and until the people of Cuba had created for themselves a stable government, it succeeded to the authority of the displaced government, so far at least that it became its duty under international law and pending the pacification of the island, to protect in all appropriate legal modes the lives, the liberty, and the property of all those who submitted to the authority of the representatives of this country.

The court further held that the United States had never recognized the existence of an established government known as the Republic of Cuba.

For these and other reasons suggested in the opinion, the court held the act of June 6, 1900, to be constitutional, and affirmed the judgment of the court below, dismissing the writ of habeas corpus. In consequence, Neely was extradited to Cuba, and has since been in the custody of that island awaiting his trial before its tribunals.

This case was among the first to discuss and pass upon the constitutional questions growing out of our recent war with Spain. As a precedent, it is important because it establishes not only the right of the United States Government, when its interests require it, to extradite a citizen to another country, even though there be no extradition treaty between the two countries, but because it further vindicates the right of the United States Government subsequent to a treaty of peace to govern conquered territory under the war power, even though such territory be not ceded to the United States but remains foreign in status. It further decides that the fact that the Government is exercising full governmental powers in such conquered territory does not of itself make the constitutional guaranties in the bill of rights applicable to the inhabitants of such conquered territory. The syllabus is as follows:

> There is no merit in the contention that article 401 of the penal code of Cuba, which provides that the public employee who, by reason of his office, has in his charge public funds or property, and takes, or consents that others should take, any part therefrom, shall be punished, applies only to persons in the public employ of Spain. Spain having withdrawn from the island, its successor has become "the public," to which the code remaining unrepealed now refers.
>
> Within the meaning of the act of June 6, 1900, (c. 793,31 Stat., 656), providing for the surrender of persons committing defined crimes within a foreign country occupied by or under the control of the United States, and fleeing to the United States, or any Territory thereof, or the District of Columbia, Cuba is foreign territory, which can not be regarded in any constitutional, legal, or international sense as a part of the Territory of the United States; and this is not affected by the fact that it is under a military governor, appointed by and representing the President in the work of assisting the inhabitants of the island in establishing a government of their own.
>
> As between the United States and Cuba that island is territory held in trust for its inhabitants, to whom it rightfully belongs, and to whose exclusive control it will be surrendered when a stable government shall have been established by their voluntary action.
>
> The act of June 6, 1900, is not unconstitutional in that it does not secure to the accused, when surrendered to a foreign country for trial, all the rights, privileges, and immunities that are guaranteed by the Constitution to persons charged with the commission in this country of crime against the United States.
>
> The provision in the Constitution relating to writs of habeas

corpus, bills of attainder, ex post facto laws, trial by jury for crimes, and generally to the fundamental guaranties of life, liberty, and property embodied in that instrument have no relation to crimes committed without the jurisdiction of the United States against the laws of a foreign country.

When an American citizen commits a crime in a foreign country he can not complain if required to submit to such modes of trial and to such punishment as the laws of that country may prescribe for its own people, unless a different mode be provided for by treaty stipulations between that country and the United States.

The contention that the United States recognized the existence of an established government, known as the Republic of Cuba, but is now using its military or executive power to overthrow it, is without merit.

The act of June 6, 1900, is not in violation of the Constitution of the United States, and this case comes within its provisions; and the court below having found that there was probable cause to believe the appellant guilty of the offenses charged, the order for his extradition was proper, and no ground existed for his discharge on habeas corpus.

Neely v. Henkel (No. 2).

[No. 406. Argued December 10, 11, 1900. Decided January 14, 1901.]

The decision in this case follows that in No. 387 (ante, 109).

Montoya v. United States. (180 U. S., 261.)

[No. 43. Argued December 14, 17, 1900. Decided February 11, 1901.]

This case and its result is described in the syllabus:

The object of the Indian depredation act is to enable citizens whose property has been taken or destroyed by Indians belonging to any band, tribe, or nation in amity with the United States to recover a judgment for their value both against the United States and the tribe to which the Indians belong, and which by the act is made responsible for the acts of marauders whom it has failed to hold in check. If the depredations have been committed by the tribe or band itself, acting in hostility to the United States, it is an act of war, for which there can be no recovery under the act.

Where a company of Apache Indians, who were dissatisfied with their surroundings, left their reservation under the leadership of Victoria, to the number of two or three hundred, became hostile, and roamed about in Old and New Mexico for about two years, committing depredations and killing citizens, it was held that they constituted a "band" within the meaning of the act; that they were not in amity with the United States, and that neither the Government nor the tribe to which they originally belonged were responsible for their depredations.

Conners v. United States. (180 U. S., 271.)

[No. 44. Argued December 17, 1900. Decided February 11, 1901.]

This case is like the last:

Where a band belonging to the Cheyenne Indians became dissatisfied with their reservation, separated themselves from the main body of the tribe, started northward to regain their former reservation, were pursued by the troops, were defeated in battle, became hostile, and committed depredations upon citizens, it was *held* that neither the Government nor the tribe to which they had originally belonged were responsible for the value of property taken or destroyed by them.

Mitchell, Governor, etc., v. Furman. (180 U. S., 402.)

[No. 23. Argued October 17, 18, 1900. Decided March 11, 1901.]

This case and the conclusion of the court are sufficiently set forth in the syllabus:

The record considered, it is held that the jurisdiction of this court on a direct appeal from the circuit court may be maintained on the ground that the construction of a treaty made under authority of the United States was drawn in question.

This was a bill to remove clouds on title, and rested on appellees' alleged legal title under a Spanish grant, and can not be sustained, because the title set up was not absolutely complete and perfect prior to the treaty between the United States and Spain. As the grant needed confirmation, and had never received it, it could not be treated as constituting absolute legal title.

Even grants of land in Florida, which were, in fact, complete and perfect prior to the ratification of the treaty, might be required by Congress to have their genuineness and their extent established by proceedings in a particular manner before they could be held valid.

Under the various acts of Congress cited the cause of action proceeded on in this suit was barred by failure to comply with their provisions.

Li Sing v. United States. (180 U. S., 486.)

[No. 27. Argued April 18, 19, 1900. Decided March 18, 1901.]

This case arose out of an order for the deportation of a Chinaman and is sufficiently described in the syllabus:

Li Sing was a Chinaman who, after residing for years in the United States, returned temporarily to China, taking with him a certificate purporting to have been issued by the Imperial Government of China, at its consulate in New York, and signed by its consul, stating that he was permitted to return to the United States, that he was entitled to do so, and that he was a wholesale grocer. On his return to the United States by way of Canada, he presented

this certificate to the United States collector of customs at Malone, N. Y., who canceled it and permitted him to enter the country. Subsequently he was brought before the commissioner of the United States for the southern district of New York, charged with having unlawfully entered the United States, being a laborer. At the examination he set up that he had a right to remain here, and that he was a merchant. The commissioner found that on his departure from the United States he was and had long been a laborer, and ordered his deportation. *Held*, that the decision of the collector at Malone was not final, and that by the act of October 1, 1888, c. 1064, the certificate issued to him by the Chinese consul on his departure from the United States was annulled.

Fong Yue Ting v. *United States* (149 U. S., 698) affirmed and followed, especially to the points: (1) That the provision of the statute which puts the burden of proof upon the alien of rebutting the presumption arising from his having no certificate, as well as the requirement of proof "by at least one credible witness that he was a resident of the United States at the time of the passage of the act," is within the acknowledged power of every legislature to prescribe the evidence which shall be received, and the effect of that evidence in the courts of its own government; (2) that the requirement not allowing the fact of residence here at the time of the passage of the act to be proved solely by the testimony of aliens in a like situation was a constitutional provision; and (3) that the question whether and upon what conditions these aliens shall be permitted to remain within the United States being one to be determined by the political departments of the Government, the judicial department can not properly express an opinion upon the wisdom, the policy, or the justice of the measures enacted by Congress in the exercise of the powers confided to it by the Constitution over this subject.

Treat v. White (181 U. S., 264).

[No. 227. Argued April 10, 1901. Decided April 29, 1901.]

This case involved the construction of section 25, Schedule A, of the war-revenue act of June 13, 1898, which provides for a stamp duty upon "all sales, or agreements to sell, or memoranda of sales or deliveries or transfers of shares or certificates of stock in any association, company, or corporation."

The question arose whether the form of sale known on the Stock Exchange as a "call" was an "agreement to sell" within the meaning of the section cited. The defendant, a member of the New York Stock Exchange, had paid under protest the sum of $604, being the stamp duties on "calls" upon 30,200 shares of corporate stock. The call was in substance an option on the part of the holder, for which he paid a valuable consideration, to demand of the broker the shares of stock named in the memorandum, and it was contended that the mere conditional agreement to sell on the exercise of an option was not an agreement to sell within the meaning of Congress. The court, however, held otherwise, and sustained the collection of the taxes.

Fairbank v. The United States. (181 U. S., 283.)

[No. 226. Argued December 13, 1900. Decided April 15, 1901.]

The plaintiff in error was convicted of issuing, as agent for the Northern Pacific Railroad, an export bill of lading for wheat exported from Minnesota to Liverpool, without affixing the internal-revenue stamp required by the war-revenue act of June 13, 1898. The question involved was whether the stamp tax of 10 cents on foreign bills of lading, imposed by that act, violated the provision of the Constitution which reads "No tax or duty shall be laid on articles exported from any State." Notwithstanding the fact that by the act of July 6, 1797, and the act of July 1, 1862, a similar stamp tax on foreign bills of lading was imposed, the court held as follows:

> A stamp tax on a foreign bill of lading is, in substance and effect, equivalent to a tax on the articles included in that bill of lading, and therefore is a tax or duty on exports, and therefore in conflict with Article I, section 9, of the Constitution of the United States, that "No tax or duty shall be laid on articles exported from any State."
>
> An act of Congress is to be accepted as constitutional, unless on examination it clearly appears to be in conflict with provisions of the Federal Constitution.
>
> If the Constitution in its grant of powers is to be able to carry into full effect the powers granted, it is equally imperative that where prohibition or limitation is placed upon the power of Congress, that prohibition or limitation should be enforced in its spirit and to its entirety.

Barker v. Harvey, Quevas v. Harvey. (181 U. S., 481.)

[Nos. 209, 210. Argued March 20, 1901. Decided May 13, 1901.]

In these cases the title of certain Mission Indians to portions of the Warner ranch property in southern California was involved. The Indians claimed a right of permanent occupancy because of immemorial and continuous possession in their ancestors and themselves, under the early Spanish authorities and long before certain Mexican grants to other parties. It was urged in the Indians' behalf that these grants recognized and protected their interest. The title based on the grants was perfected under an act of 1851, passed to settle private land claims in California, which required claims to land derived from Spanish or Mexican authorities to be presented to a commission with a right of appeal to the courts. The act also provided that a final decree and patent should "not affect the interests of third persons;" and thereupon directed the commissioners to report to the Government the tenure by which the Mission lands are held by such Indians. It was argued that this provision included these Indians as "third persons."

No claim was presented to the commission on behalf of the Indians; and it seems that the commission made no report on the Indian tenure.

It was alleged that the Indians had abandoned the lands; but in rebuttal it was claimed that the Mission authorities themselves had merely ceased to cultivate that portion of the land on their own account, and that the Indians had not withdrawn.

The title under the patent was sustained by the California courts upon a majority opinion of the supreme court of that State, and the Supreme Court of the United States affirmed the judgment. Before quoting the syllabus of their decision it will be proper to state that these Indians are now subject to immediate ejectment from their holdings and are remaining thereon for a short time only by sufferance of the plaintiffs. It is hard to exaggerate the severity of their fate, since they not only are thrust out from homes which they and their ancestors have occupied for generations and are thus entirely deprived of subsistence, but it will be difficult to find for them suitable provision on any reservations which that country offers. This subject will no doubt be presented to Congress through the proper authorities, but as this Department has conducted the litigation and is familiar with all the circumstances it seems proper for me to say that the subject merits the careful and early attention of Congress.

The significant portion of the syllabus follows:

Held: (1) That the United States were bound to respect the rights of private property in the ceded territory, but that it had the right to require reasonable means for determining the validity of all titles within the ceded territory, to require all persons having claims to lands to present them for recognition, and to decree that all claims which are not thus presented shall be considered abandoned;

(2) That so far as the Indians are concerned, the land was rightfully to be regarded as part of the public domain, and subject to sale and disposition by the Government;

(3) That if the Indians had any claims founded on the action of the Mexican Government they abandoned them by not presenting them to the commission for consideration;

(4) That lands which were burdened with a right of permanent occupancy were not a part of the public domain, subject to the full disposal by the United States.

Schlitz Brewing Co. v. The United States. (181 U. S., 584.)

[No. 232. Argued April 11, 1901. Decided May 20, 1901.]

In this case the court held as set out in the syllabus:

Bottles and corks in which beer is bottled and exported for sale are not "imported materials used in the manufacture" of such beer within the meaning of the drawback provisions of the customs-revenue laws, although the beer be bottled and corked and subsequently heated for its better preservation.

American Sugar Refining Co. v. The United States. (181 U. S., 610.)

[Nos. 225, 236. Argued April 12, 1901. Decided May 20, 1901.]

The cases and the holding of the court are set out in the following syllabus:

> These cases, argued and submitted together, involve the appraisement of sugars imported from Brazil. The sugars were shipped "green"—that is, contained moisture, a certain portion of which drained on the voyage, whereby they became more valuable. Duties were levied and collected by the collector upon the increased valuation against the protest of the importers. Held that the appraisement so made was legal.

THE INSULAR TARIFF CASES.

MATERIAL DATES.

April 24, 1898, war declared between Spain and the United States.

July, 1898, Porto Rico occupied by the United States forces.

August 12, 1898, protocol signed.

April 11, 1899, ratifications of the Treaty of Paris exchanged.

May 1, 1900, the taking effect of the Foraker Act for the government of Porto Rico.

THE CASES AND HOW THEY AROSE.

No. 340. *Goetze* v. *The United States.* Importation of goods (tobacco) from Porto Rico into the United States (New York) on June 6, 1899, after the ratification of the treaty and before the taking effect of the Foraker Act.

No. 419. *Fourteen Diamond Rings, Pepke, claimant,* v. *The United States.* Seizure and forfeiture (at Chicago) of diamond rings brought into the United States from the Philippines, without the payment of duty, by a soldier, during the summer of 1899, after the ratification of the treaty.

No. 456. *De Lima et al.* v. *Bidwell, Collector* (New York). Importation of goods (sugars) from Porto Rico into the United States (New York) in the summer of 1899, after the ratification of the treaty and before the taking effect of the Foraker Act.

No. 501. *Dooley et al.* v. *The United States.* Importation of goods from the United States (New York) into Porto Rico between April 11, 1899, and May 1, 1900, during the military occupation and after the ratification of the treaty, but before the Foraker Act took effect.

No. 502. *Dooley et al.* v. *The United States.* Importation of goods from the United States (New York) into Porto Rico from May 1, 1900, to October 23, 1900, under the Foraker Act.

No. 507. *Downes et al.* v. *Bidwell, collector.* Importation of oranges

from Porto Rico into the United States (New York) in November, 1900, under the Foraker Act.

No. 509. *Armstrong* v. *The United States.* Importation of goods into Porto Rico from the United States (New York) between August 12, 1898, and December 5, 1899, during the military occupation, and partly before and partly after the ratification of the treaty.

No. 515. *Crossman et al.* v. *The United States.* Importation of goods (liquors) from Hawaii into the United States (New York) in April, 1900, after the passage of the resolution of annexation (July 7, 1898) and before the taking effect of the act of April 30, 1900, providing a government for that Territory.

THE PARTICULAR DUTIES DRAWN IN QUESTION AND THE HOLDING OF THE COURT.

All these cases were virtually customs cases. They raised the validity under the Constitution of the following exactions:

(1) Duties on goods imported into the United States from the Philippines after the ratification of the treaty: *The Fourteen Diamond Rings*, *Pepke*, *Claimant*. This case has not yet been decided.

(2) Duties on goods imported into Porto Rico from the United States during the military occupation of the island, after the signing of the protocol and before the ratification of the treaty of Paris. Such were some of the duties collected in the *Armstrong* case. *Held:* These duties were properly collected under the military power.

(3) Duties collected on goods imported into Porto Rico from the United States during the military occupation but after the cession of Porto Rico by the ratification of the treaty and before the taking effect of the Foraker Act. Such duties were collected in the *Armstrong* case and in the *First Dooley* case. *Held*, These duties were improperly exacted, following the decision in the *De Lima* case.

(4) Duties collected on goods imported into the United States from Porto Rico after the ratification of the treaty and before the taking effect of the Porto Rican act. Such were the duties exacted in the *Goetze* case and in the *De Lima* case. *Held*, In the *De Lima* case, that these duties were improperly exacted, Porto Rico by the cession having ceased to be "a foreign country" within the meaning of the Dingley Act.

The *Goetze* case went off on a question of jurisdiction, as will be described later.

(5) Duties collected on goods coming into the United States from Porto Rico after the Foraker act took effect. The validity of these exactions was brought in question in the *Downes* case and sustained, the court holding that by the cession Porto Rico did not become a part of the United States within that provision of the Constitution which declares that "all duties, imposts, and excises shall be uniform throughout the United States."

(6) Duties collected on goods coming into Porto Rico from the United States after the taking effect of the Porto Rican act. Such were the duties exacted in the *Second Dooley* case. This case has not been decided by the court.

(7) Duties on goods imported into the United States from Hawaii after the resolution of annexation and before the Hawaiian act went into effect. Such were the duties in the *Crossman* case. This case went off on a jurisdictional question.

QUESTIONS OF JURISDICTION.

Counsel in testing the constitutionality of the customs exactions referred to, adopted different courses of procedure, with the following result:

In the *Goetze* and *Crossman* cases the duties were paid under protest and the procedure laid down in the customs administrative act was followed. The court held this to be an improper method, taking the position that the Board of General Appraisers had no jurisdiction of the cases. There was, therefore, no decision of these cases upon the merits.

In the *De Lima* and the *Downes* cases the duties were paid under protest and suit brought against the collector to recover them. This method of procedure was sustained.

In the *Dooley* cases and the *Armstrong* cases the duties were paid under protest and suit brought against the United States to recover back, the *Armstrong* case being brought in the Court of Claims and the *Dooley* cases in the United States Circuit Court. This the court held to be a proper method of procedure.

GENERAL RESULT OF THE CASES.

The first case decided was that of *De Lima* v. *Bidwell*, *Collector*, to recover back duties collected on sugars imported from Porto Rico into the United States after the ratification of the treaty and before the taking effect of the Foraker Act. The court held that the duties were wrongfully exacted. Mr. Justice Brown delivered the opinion, and the Chief Justice, Mr. Justice Harlan, Mr. Justice Brewer, and Mr. Justice Peckham concurred. The opinion of the court was placed upon the ground, not that Porto Rico became a part of the United States under the Constitution by the ratification of the treaty, but that as a result of the cession of the island and its possession by the United States it ceased to be "a foreign country," within the meaning of the Dingley law, and therefore duties could not be collected under that law on goods imported from Porto Rico.

Mr. Justice McKenna, Mr. Justice White, Mr. Justice Shiras, and Mr. Justice Gray dissented on the ground that, in the absence of legislation by Congress showing an intention to incorporate Porto Rico within what might be termed the customs union of the United States,

the island remained foreign country within the meaning of our customs law.

The fundamental question involved in the cases, namely, whether by the ratification of the treaty Porto Rico became an integral part of the United States within the meaning of the provision of the Constitution which declares that "All duties, imposts, and excises shall be uniform throughout the United States," was decided in the case of *Downes* v. *Bidwell, collector*, a suit to recover back duties collected in New York on goods brought from Porto Rico after the Foraker Act went into effect. The court, Mr. Justice Brown delivering the opinion, and Justices Gray, White, Shiras, and McKenna concurring, held that these duties were lawfully exacted. Mr. Justice Brown delivered the opinion of the court. Mr. Justice White delivered a concurring opinion for himself; Mr. Justice Shiras, and Mr. Justice McKenna, and Mr. Justice Gray delivered a concurring opinion.

The Chief Justice, with whom concurred Mr. Justice Harlan, Mr. Justice Brewer, and Mr. Justice Peckham, dissented, the Chief Justice and Mr. Justice Harlan delivering dissenting opinions.

The court held that Porto Rico did not by the cession become an integral part of the United States within the meaning of that provision of the Constitution which requires all taxes to be uniform "throughout the United States," and that therefore Congress, under the power conferred to govern territory belonging to the United States, had a right to provide for Porto Rico a system of customs and internal taxation appropriate to its needs and distinct from that in force in the United States.

The syllabi of the various cases follow:

De Lima v. Bidwell. (182 U. S., 1.)

[No. 456. Argued January 8, 9, 10, 11, 1901. Decided May 27, 1901.]

By the customs administrative act of 1890, an appeal is given from the decision of the collector "as to the rate and amount of the duties chargeable upon imported merchandise," to the Board of General Appraisers, who are authorized to decide "as to the construction of the law and the facts respecting the classification of such merchandise, and the rate of duties imposed thereon under such classification;" but where the merchandise is alleged not to have been imported at all, but to have been brought from one domestic port to another, the Board of General Appraisers has no jurisdiction of the case, and an action for money had and received will lie against the collector to recover back duties assessed by him upon such property, and paid under protest.

With the ratification of the treaty of peace between the United States and Spain, April 11, 1899, the island of Porto Rico ceased to be a "foreign country" within the meaning of the tariff laws.

Whatever effect be given to the act of March 24, 1900, applying for the benefit of Porto Rico the duties received on importa-

tions from that island after the evacuation by the Spanish forces, it has no application to an action brought before the act was passed.

Downes v. Bidwell. (182 U. S., 244.)

[No. 507. Argued January 8, 9, 10, 11, 1901. Decided May 27, 1901.]

By Mr. Justice Brown, in announcing the conclusion and judgment of the court.

The circuit courts have jurisdiction, regardless of amount of actions, against a collector of customs for duties exacted and paid under protest upon merchandise alleged not to have been imported.

The island of Porto Rico is not a part of the United States within that provision of the Constitution which declares that "all duties, imposts, and excises shall be uniform throughout the United States."

There is a clear distinction between such prohibitions of the Constitution as go to the very root of the power of Congress to act at all, irrespective of time or place, and such as are operative only throughout the United States or among the several States.

A long-continued and uniform interpretation, put by the executive and legislative departments of the Government upon a clause in the Constitution, should be followed by the judicial department, unless such interpretation be manifestly contrary to its letter or spirit.

By Mr. Justice White, with whom Mr. Justice Shiras and Mr. Justice McKenna concurred.

The Government of the United States was born of the Constitution, and all powers which it enjoys or may exercise must be either derived expressly or by implication from that instrument. Ever then, when an act of any department is challenged, because not warranted by the Constitution, the existence of the authority is to be ascertained by determining whether the power has been conferred by the Constitution, either in express terms or by lawful implication, to be drawn from the express authority conferred or deduced as an attribute which legitimately inheres in the nature of the powers given, and which flows from the character of the government established by the Constitution. In other words, whilst confined to its constitutional orbit, the Government of the United States is supreme within its lawful sphere.

Every function of the Government being thus derived from the Constitution, it follows that that instrument is everywhere and at all times potential in so far as its provisions are applicable.

Hence it is that wherever a power is given by the Constitution and there is a limitation imposed on the authority, such restriction operates upon and confines every action on the subject within its constitutional limits.

Consequently it is impossible to conceive that where conditions are brought about to which any particular provision of the Constitution applies its controlling influence may be frustrated by the action of any or all of the departments of the Government. Those departments, when discharging, within the limits of their consti-

tutional power, the duties which rest on them, may of course deal with the subjects committed to them in such a way as to cause the matter dealt with to come under the control of provisions of the Constitution which may not have been previously applicable. But this does not conflict with the doctrine just stated, or presuppose that the Constitution may or may not be applicable at the election of any agency of the Government.

The Constitution has undoubtedly conferred on Congress the right to create such municipal organizations as it may deem best for all the Territories of the United States whether they have been incorporated or not, to give to the inhabitants as respects the local governments such degree of representation as may be conductive to the public well-being, to deprive such Territory of representative government if it is considered just to do so, and to change such local governments at discretion.

As Congress in governing the Territories is subject to the Constitution, it results that all the limitations of the Constitution which are applicable to Congress in exercising this authority necessarily limit its power on this subject. It follows also that every provision of the Constitution which is applicable to the Territories is also controlling therein. To justify a departure from the elementary principle by a criticism of the opinion of Mr. Chief Justice Taney in *Scott* v. *Sanford*, 19 How., 393, is unwarranted. Whatever may be the view entertained of the correctness of the opinion of the court in that case, in so far as it interpreted a particular provision of the Constitution concerning slavery and decided that as so construed it was in force in the Territories, this in no way affects the principle which that decision announced, that the applicable provisions of the Constitution were operative.

In the case of the Territories, as in every other instance when a provision of the Constitution is invoked, the question which arises is, not whether the Constitution is operative, for that is self-evident, but whether the provision relied on is applicable.

As Congress derives its authority to levy local taxes for local purposes within the Territories, not from the general grant of power to tax as expressed in the Constitution, it follows that its right to locally tax is not to be measured by the provision empowering Congress "to lay and collect taxes, duties, imposts, and excises," and is not restrained by the requirement of uniformity throughout the United States. But the power just referred to, as well as the qualification of uniformity, restrains Congress from imposing an impost duty on goods coming into the United States from a Territory which has been incorporated into and forms a part of the United States. This results because the clause of the Constitution in question does not confer upon Congress power to impose such an impost duty on goods coming from one part of the United States to another part thereof, and such duty besides would be repugnant to the requirement of uniformity throughout the United States.

By Mr. Justice Gray:

The civil Government of the United States can not extend immediately and of its own force over territory acquired by war. Such territory must necessarily, in the first instance, be governed by

the military power under the control of the President, as Commander in Chief. Civil government can not take effect at once, as soon as possession is acquired under military authority or even as soon as that possession is confirmed by treaty. It can only be put in operation by action of the appropriate political department of the Government, at such time and in such degree as that department may determine.

In a conquered territory civil government must take effect either by the action of the treaty-making power or by that of the Congress of the United States. The office of a treaty of cession ordinarily is to put an end to all authority of the foreign government over the territory and to subject the territory to the disposition of the Government of the United States.

The government and disposition of territory so acquired belong to the Government of the United States, consisting of the President, the Senate—elected by the States—and the House of Representatives—chosen by and immediately representing the people of the United States.

So long as Congress has not incorporated the territory into the United States, neither military occupation nor cession by treaty makes the conquered territory domestic territory in the sense of the revenue laws. But those laws concerning "foreign countries" remain applicable to the conquered territory until changed by Congress.

If Congress is not ready to construct a complete government for the conquered territory, it may establish a temporary government, which is not subject to all the restrictions of the Constitution.

Goetze v. United States. (182 U. S., 221.)

Crossman v. United States. (182 U. S., 221.)

No. 340 was argued December 17, 18, 19, 20, 1900; No. 515 was argued January 14, 15, 1901. The two were decided together May 27, 1901.

De Lima v. *Bidwell*, ante, 1, followed by reversing the action of the general appraisers.

Dooley v. United States. (182 U. S., 222.)

No. 501. Argued January 8, 9, 10, 11, 1901. Decided May 27, 1901.

The Court of Claims and the circuit courts, acting as such, have jurisdiction of actions for the recovery of duties illegally exacted upon merchandise alleged not to have been imported from a foreign country.

Duties upon imports from the United States to Porto Rico collected by the military commander and by the President, as Commander in Chief, from the time possession was taken of the island until the ratification of the treaty of peace, were legally exacted under the war power.

As the right to exact duties upon importations from Porto Rico to New York ceased with the ratification of the treaty of peace, the correlative right to exact duties upon imports from New York to Porto Rico also ceased at the same time.

Armstrong v. United States. (182 U. S., 243.)

[No. 509. Argued January 8, 9, 10, and 11, 1901. Decided May 27, 1901.]

Dooley v. United States, ante, 222, followed.

Huus v. New York and Porto Rico Steamship Company. (182 U. S., 392.)

[No. 514. Argued January 11, 14, 1901. Decided May 27, 1901.]

Vessels engaged in trade between Porto Rican ports and ports of the United States are engaged in the coasting trade in the sense in which those words are used in the New York pilotage statutes; and steam vessels engaged in such trade are coastwise steam vessels under Revised Statutes, section 4444.

The Fourteen Diamond Rings Case.

The Second Dooley Case.

Since the above was put in type the court (on December 2, 1901) decided the *Fourteen Diamond Rings* case and the *Second Dooley* case. Following the decision in the *De Lima* case, the court held that by the cession of the treaty the Philippines ceased to be "foreign country" within the meaning of the Dingley law and became territory appurtenant to the United States. For this reason the court held that, pending action by Congress, duties could not be collected under the Dingley law on goods imported into the United States from the Philippines. Chief Justice Fuller delivered the opinion, in which Justices Harlan, Brown, Brewer, and Peckham concurred.

It was pointed out in the opinion that neither the McEnery resolution nor the insurrection in the Philippines availed to distinguish the status of the Philippines under the cession from that of Porto Rico. The resolution, passed as it was by a mere majority of the Senate subsequent to the ratification of the treaty, and not passed by the House and approved by the President, had validity neither as an act of the treaty-making nor the legislative power.

As to the insurrection, it could not serve to affect the title and sovereignty of the United States over the islands. Spain had held sovereignty over them for centuries and had legally transferred her title to the United States. The action of the President in suppressing the insurrection could be regarded only as an exercise of lawful authority over territory under the rightful sovereignty of the United States, and not as the conduct of a war of conquest for the subjugation of people not lawfully under our sovereignty.

Mr. Justice Gray delivered a dissenting opinion, in which Justices White, Shiras, and McKenna concurred.

The Second Dooley case was a suit brought to recover back duties collected under the Foraker Act on goods brought into Porto Rico from the United States. In addition to the objection urged against the duties levied under the Foraker Act on goods brought into the United States from Porto Rico and overruled in the *Dooley* case, the validity of these duties was assailed on the ground that they violated that prohibition of the Constitution forbidding Congress to impose any duty upon articles exported from any State. The court held that within the meaning of the Constitution only those articles which are destined for a foreign country constitute "articles exported from any State"; that Porto Rico was not "a foreign country", but, under the decision in the *De Lima* case, territory appurtenant to the United States, and that therefore goods shipped from the United States to Porto Rico were not exports from a State within the meaning of the Constitution.

Mr. Justice Brown delivered the opinion, in which Justices Gray, Shiras, White, and McKenna concurred, while the Chief Justice and Justices Harlan, Brewer, and Peckham dissented.

Glavey v. United States (182 U. S., 595).

[No. 235. Argued April 11, 12, 1901. Decided May 27, 1901.]

When an office with a fixed salary has been created by statute and a person duly appointed to it has qualified and entered upon the discharge of his duties, he is entitled, during his incumbency, to be paid the salary prescribed by statute.

Such an appointment is complete when duly made by the President and confirmed by the Senate, and the giving of a bond required by law is a mere ministerial act for the security of the Government, and not a condition precedent to his authority to act in performance of the duties of the office.

As the act of 1882 created a distinct, separate office, with a fixed annual salary for the incumbent, to be paid by the Secretary of the Treasury, as the plaintiff was legally appointed thereto by the Secretary under and by virtue alone of that act, and as he entered upon the discharge of the duties appertaining to that position, he was entitled to demand the salary attached by Congress to the office.

BUSINESS IN OTHER COURTS.

The reports of Assistant Attorney-General Pradt, Assistant Attorney-General Thompson, Assistant Attorney-General Fuller, and United States Attorney Reynolds show what has been the volume of business in general cases before the Court of Claims, in the Indian depredation cases, in claims before the Spanish Treaty Claims Commission, and before the Court of Private Land Claims, respectively, and the prompt and efficient manner in which that business has been conducted on the part of the Government.

I refer to these reports for detailed information.

NEW DEPARTMENT BUILDING.

I invite your consideration to the proposed new building for this Department.

In the last annual report my predecessor informed Congress that "on account of the extraordinary increase in the cost of building materials and labor it would be impossible to complete a building of the design selected with the money authorized by the original appropriation, and that an additional appropriation would be necessary." He further explained that to construct a building within the present appropriation "would require the use of materials so cheap and common as to render the building a blemish rather than an ornament to the national capital."

He therefore renewed the recommendation of the previous year for an additional appropriation so that it would be possible "to erect and furnish a building of the material and in the style provided for by the architect's plans and specifications."

No additional appropriation has yet been made and the construction of the proposed Department building awaits your further action.

No building should be constructed except such as will meet the just expectations not only of the present but of future generations. The building should be worthy of the purpose to which it is to be devoted and of the Government whose dignity it in part represents. In this connection due regard should be had to the general plan for the adornment of Washington, which is now under consideration by a competent commission. Washington has become a city not only of cosmopolitan dignity but of exceptional beauty, and no building should be so constructed or located as to mar the symmetry of its development.

If it be deemed inexpedient to make such additional appropriation for the purposes of this Department only, then I suggest that a building might be constructed which would not merely accommodate the executive offices of the Department of Justice, but would also make suitable provision for the Court of Claims and other bodies whose work is affiliated with that of this Department.

UNITED STATES PRISONERS.

Exhibit J, with this report, shows where United States prisoners have been confined during the year, the districts in which they have been convicted, the number from each district, and the total number in each institution.

On July 1, 1900, there were 2,932 United States convicts in the various prisons and reformatories of the country. At the close of the last fiscal year, June 30, 1901, there were 3,030.

Of the total number in confinement June 30, 1901, 806 were in the United States penitentiary at Fort Leavenworth, Kans., and 97 in the prison at McNeil Island, Washington. The remainder, 2,127, were in the various State institutions used for the purpose.

STATISTICS.

Number of prisoners received during the year in penitentiary.

Total number in custody	4,641
Discharged during the year	1,611
In confinement on June 30, 1901	3,030
Discharged by expiration of sentence	1,469
Died	41
Pardoned	63
Release by writ of habeas corpus	27
Transferred to insane asylum	11
Received during year ending June 30, 1901	1,650
Of those in prison on June 30, 1901, there were employed on piece price, 692; on State account, 422; on prison duties, 1,682.	
Convicted of violations of revenue laws	140
Counterfeiting	222
Violation of postal laws	313
Introducing liquor into Indian country or selling liquor to Indians	166
Violation of laws relating to pensions	28
Larceny	217
Murder and manslaughter	88
Embezzlement	11
Perjury	23
Forgery	12
Robbery and burglary	150
Offenses other than those named	280
Born in United States	1,469
Foreign born	181
Males	1,620
Females	30
Whites	1,050
Colored	416
Indians and Chinese	184
Could read and write	1,171
Could read only	32
Could neither read nor write	457
Married	745
Single	905
In prison for first time	1,500
Heretofore served sentence	150
Received under 20 years of age	250
Between 20 and 30	687
Between 30 and 40	368
Between 40 and 50	201
Over 50 years of age	136
Illiterate	151
Disabled or sick	60

UNITED STATES PENITENTIARY AT FORT LEAVENWORTH, KANS.

On June 30, 1900, 902 prisoners were confined in this institution, the number, on the corresponding date in the present year, being 806.

The convicts have been occupied mostly in the erection of the buildings at the new penitentiary site, in quarrying and cutting stone,

making brick, and in the general work of construction where unskilled labor could be utilized.

The total expense of maintaining the institution during the year ended June 30, 1901, has been $160,316.88, and the daily average cost per capita about 54 cents. The average daily per capita cost of subsistence alone was about 11 cents. The health of the inmates has been good, as shown by the report of the penitentiary physician, the outdoor labor in which the men have been engaged having contributed largely to this result.

The report of the warden accompanies this report as Exhibit K.

NEW PENITENTIARY, FORT LEAVENWORTH, KANS.

During the past year the work of construction has progressed favorably, and earnest efforts have been made to complete the interior cell houses, boiler house, and laundry building. The report of the superintendent of construction shows in detail the large amount of work accomplished, which, in view of the fact that the prisoners are usually ignorant and wholly unskilled before reaching the prison, is decidedly creditable. The construction of large buildings by labor of this kind is necessarily a work of time, but the result is most satisfactory, and compares well with any structures of the kind. It is the intention to push the work on the cell house to early completion in order that the men employed may be housed on the grounds, and thus avoid the necessity for the long daily march to and from the old prison.

UNITED STATES PENITENTIARY, ATLANTA, GA.

The plans for the construction of the penitentiary at Atlanta, Ga., have been carried out, and the buildings will be ready for occupancy about the first of January, 1902. As stated in the last annual report, the plans, as approved, provide for a complete prison with accommodations for about 500 prisoners, administration building, dining room, offices, steam and electric plant, etc. While this is all that could be accomplished within the limits of the appropriation, the plans are prepared with a view to the addition, at any time the Government may deem requisite, of a main building large enough to accommodate altogether 1,200 convicts at least. This additional building may possibly be erected by the labor of the prisoners should Congress deem it inexpedient to appropriate for its erection by contract.

The new penitentiary is modern in every respect, and follows in its construction the best and most enlightened ideas relative to such structures. It is expected that, when completed, the Government may congratulate itself on possessing a model prison.

PENITENTIARY AT M'NEIL ISLAND, WASHINGTON.

This institution has been carried on for a number of years as a Government prison, the expenses of maintenance being defrayed from the

general appropriation "Support of United States prisoners." It is understood to be but poorly suited to the purpose, however, and some action, apparently, should be taken looking either to its discontinuance entirely or its conversion into a suitable prison for Federal convicts from the Western districts. If the latter is impracticable, because of its location or otherwise, the propriety of securing a new site for the erection of a third United States prison might possibly be considered.

The history of the present institution shows that, after the approval of the act of February 22, 1889 (25 Stat., 680), providing for the admission of Washington Territory into the Union as a State, the attention of Federal officials therein was called in 1890 to section 15 of said act, which the Department seemed to hold provided for the transfer of the United States penitentiary on McNeil Island to the State of Washington. Instructions to this effect were given the then United States marshal, district of Washington, but the governor of the State declined to accept the institution with the prisoners therein until specific authority for its acceptance had been conferred on him by the legislature of Washington. This apparently has never been done, and the United States marshal accordingly was directed to continue to conduct the penitentiary as before.

Since 1890, therefore, the prison has been conducted, under the direct supervision of the United States marshal for the district of Washington, as a place of confinement for Federal prisoners from Washington and adjacent districts.

At the present time there are 100 prisoners confined there, 70 from Washington, 8 from Idaho, 3 from Oregon, and 19 from Alaska.

In the fiscal year 1899 Congress appropriated $5,000 for repair of the buildings, which amount was judiciously expended.

The actual cost of maintenance for the last fiscal year has been $16,142.13, an average per capita of about 52 cents per diem.

UNITED STATES JAIL, DISTRICT OF COLUMBIA.

The report of the warden accompanies this report as Exhibit N. The average daily number of prisoners during the year was 315. The average cost of maintenance was 34½ cents per capita per diem, with 9⅔ cents the average cost per capita per day for subsistence alone.

The jail is well conducted, and ranks among the best in the country.

UNIFORM SYSTEM OF COMMUTATION FOR FEDERAL PRISONERS.

I respectfully suggest that Congress consider the advisability of adopting a new and uniform system of commutation with respect to Federal prisoners.

Under the present system, such prisoners, when confined in State penal institutions, are given the benefit of the same rules of credit for good behavior as are applicable to other prisoners under State laws. (R. S., 5544.) If confined in a Federal prison, however, or in one to

which no State commutation law is applicable, the prisoner then receives "a deduction * * * of five days in each and every calendar month." (Act of March 3, 1875.)

I have appended to this report a statement (Exhibit W) of the commutation laws which exist in the various States. It will be seen that both in the amounts of the commutation and the methods of administration they vary widely. In some the commutation is fixed. In others it is graduated and progressive. In some the prisoner is entitled to his commutation upon the certificate of the prison officials. In others the commutation rests wholly in the discretion of the pardoning power of the State, which determines not merely whether there shall be a commutation, but also the exact amount thereof.

The systems of commutation in this country, therefore, vary as widely as the theories of penologists. Twenty States have adopted the parole system, seven the undeterminate sentence, and four a system of conditional pardons. The laws further vary as to the classes of prisoners, the offenses, and as to the institutions to which their provisions are applicable.

Under the present system, moreover, the sentences of Federal prisoners are liable to sudden and radical changes in any State, as the State legislation may be modified from time to time.

The attempt of the United States, therefore, to assimilate its system of commutation to the various local systems prevailing in the different States, has led both to inequality and uncertainty. If, for example, two Federal prisoners are convicted of the same offense, and each receives a sentence of imprisonment for the term of three years, and one is confined in New Hampshire and the other in Ohio, their respective sentences may by good behavior be diminished as follows: The prisoner in New Hampshire can not earn a greater diminution of his sentence than seventy-two days, while the prisoner in Ohio can earn a maximum of two hundred and eighty-eight days.

I therefore respectfully suggest that Congress consider the advisability of repealing sections 5543 and 5544 of the Revised Statutes and the act of March 3, 1875, and in their stead providing a uniform and stable system of commutation so that Federal prisoners of the same class may receive equal treatment.

SOLICITOR OF THE TREASURY.

The report of the Solicitor of the Treasury (Exhibit H) shows the amount, character, and results of litigation conducted under his direction for the fiscal year ending June 30, 1901. The whole number of suits decided or otherwise disposed of during the year was 4,999, and the amount of judgments obtained $661,537.38. The tabular statements accompanying his report show the details of the large amount of business conducted by his office. I approve his recommendation as to the amendment of section 773, Revised Statutes, so as to require

United States attorneys to forward the annual reports sent to his office on the 1st day of September in each year instead of October.

COMMISSION TO REVISE AND CODIFY THE CRIMINAL AND PENAL LAWS.

The commission to revise and codify the criminal and penal laws of the United States has reported a project for a penal code. This embraces the penal provisions of existing law which could be separated from their context without impairing their significance or efficacy, and also a complete code for the punishment of crimes committed upon places within the exclusive jurisdiction of the United States. The considerations in behalf of the latter, instead of the present expedient of giving effect to the laws of the several States for the definition and punishment of offenses not covered by any statute of the United States, are set forth in the report of the commissioners accompanying the proposed code, which also recites and explains the changes in existing laws that are embodied in the revision. A draft of the work reported by the commission has been submitted to the heads of departments and the judges and attorneys of the United States for examination and correction, and diligent efforts have been expended to make it supply the need of a comprehensive and efficient system of provisions for the definition and punishment of offenses against, or cognizable by, the United States. It is manifestly true that the present statutes for this purpose, which are for the most part survivals of the crimes acts of 1790 and 1825, are inadequate and defective in many serious respects, and it is hoped that Congress will proceed with the consideration of the code reported by the commission as promptly as its other duties will permit.

In pursuance of a provision in the sundry civil act of March 3, 1899, the commission also submits a revision and codification of the statutes relating to the organization, jurisdiction, and practice of the courts of the United States. Certain changes in the present judicial establishment are proposed in this work. The most notable of these is the transfer to the district courts of the original jurisdiction now vested in the circuit courts. It is further proposed that the circuit courts, to consist of the justice of the supreme court assigned to the circuit when in attendance and three circuit judges, shall succeed the present circuit courts of appeal as intermediate courts of review. The abbreviation of transcripts on appeal, the simplification of the forms of indictments, the granting to the United States of the right to secure a review of adverse decisions on demurrers to indictments and other rulings of a like character, provision for the service of venires by registered letter, and a more uniform system of appeals from the supreme courts of the Territories are among the other changes embodied in the revision. Attention is invited to the report of the commission accompanying the code for a recital and explanation of the amendments which it embraces and of the considerations which prompted them.

JUDICIAL SALARIES.

The propriety of increasing the salaries paid by the United States to its judicial officers is a matter which has been mentioned heretofore by the Attorney-General and has occupied the attention of Congress. I wish to direct particular attention to that part of the report of the commission which deals with this subject. The report states the reasons for the increased salaries provided for, as follows:

> The present salaries are less than those paid for like services in the more populous States; they are intrinsically inadequate in contemplation of the professional standing and attainments of the incumbents, and they operate to the detriment of the public in that in some instances they exclude lawyers of the highest degree of fitness from the judicial service of the United States. It is a fact of frequent occurrence that a practitioner receives a single fee exceeding the annual salary of the judge before whom he appears in the cause. The justices of the court of last resort in New York receive $17,500 per year and the judges of general sessions $12,000. Compared with England the contrast is even more striking and significant. The lord chief justice has a salary of $40,000, and each of the judges at nisi prius a salary of $25,000. These considerations have exercised a growing influence upon public sentiment, and the views of the legal profession in behalf of the more adequate compensation of Federal judges have been voiced by the American Bar Association and like organizations in several of the States and larger cities of the Union.

To this I may add that the present salaries of the Chief Justice and associate justices of the Supreme Court were fixed by the act of March 3, 1873, since which date the earning capacity of the legal profession has increased greatly, as has that of other professions and businesses.

I concur with the commission in saying that the salaries of the United States judges should be increased, but I make no recommendation as to the amount of the increase. At the first session of the Fifty-sixth Congress a bill was introduced in the Senate (S. 3450) "to fix the salaries of certain judges of the United States," which was reported to the Senate March 26, 1900, with amendments and an accompanying table showing the salaries paid United States judges, to State judges in certain of the States, to judges of the English courts, and to certain executive officers under the United States Government. I consider it essential to the preservation of the high standard of the judiciary of the United States that this question of the salaries of the judges should receive particular and careful attention on the part of Congress.

SPANISH TREATY CLAIMS.

The commission provided for by the act of March 2, 1901, to carry into effect the stipulations of Article VII of the treaty between the United States and Spain, concluded December 10, 1898, and authorized to receive, examine, and adjudicate all claims of citizens of the United

States against Spain in accordance with this treaty, organized at the Department of Justice April 8, 1901, on which date the first claim was filed. Between April 8 and October 8, 1901 (the limit of time for filing claims), 494 claims were filed, aggregating $60,158,878. The act authorizes the commission to receive claims within six months after the termination of the first period, if the claimants shall establish to their satisfaction good reasons for not presenting the same earlier; and it seems probable that additional claims will be presented during the current six months.

The appropriation carried by the act covers both the expenses of the commission and of the defense of claims before it, and is manifestly too small for the first of these were the latter taken away. I recommend that Congress make such appropriation in the deficiency and regular acts as will be adequate for the expenses of the commission itself for the remainder of this fiscal year and for the fiscal year 1903, and that a separate appropriation be made to cover the expense of the defense of these claims before the commission, and the salary of the Assistant Attorney-General, assistant attorneys, and other necessary force, and at the proper time will present a deficiency estimate for the present fiscal year and an estimate for the regular appropriation for 1903.

As, in order to insure an effective defense of these claims, it may be necessary to make preliminary investigations and to take testimony, not only in widely separated localities in the United States, but also in Spain and Cuba, I call attention to the desirability of legislation defining the methods by which additional testimony concerning claims before the commission may be taken, in view of the requirement of the act that the commissioners to take testimony shall be citizens of the United States, and the provision that every witness swearing falsely shall be punishable under the laws of the United States. I think Congress should act in this matter without delay, so that there shall be no ambiguity as to the evidence which may be taken, received, and considered, and by whom and how it may be taken.

REPORT OF THE ATTORNEY-GENERAL OF PORTO RICO.

Under the provisions of section 21 of the act approved April 12, 1900, "An act temporarily to provide revenues and a civil government for Porto Rico, and for other purposes," I have transmitted to Congress the report of the attorney-general of Porto Rico, and have also included it in this report as Exhibit V.

REPORT OF THE COMMISSION TO COMPILE AND REVISE THE LAWS OF PORTO RICO.

Section 40 of the act cited above provided for the appointment by the President of a commission to compile and revise the laws of Porto

Rico, also the various codes of procedure and systems of municipal government now in force, and to frame and report such legislation as may be necessary to make a simple, harmonious, and economical government, and to provide for other matters, the commission being directed to make full and final report, in both the English and Spanish languages, to the Congress on or before one year after the passage of the act. Section 41 provided that the act should take effect and be in force from and after the first day of May, 1900. It was approved April 12, 1900. Congress adjourned March 3, 1901, before the expiration of the year within which the commission was directed to report. The report of the commission was completed April 12, 1901, during the recess of Congress. After consultation with the commission it seemed advisable, in view of the length of time which would necessarily be consumed in a careful revision of the English and Spanish texts of the report (the commission having been directed to report in both languages), that it should be put in printed form before presentation to Congress. This has been done and the report forwarded in that shape.

INSULAR AND TERRITORIAL AFFAIRS.

I desire to call attention to the estimate sent to the Treasury for a bureau or division of the Department to have charge of insular and other territorial affairs. The sum asked for is small, in view of the extent and importance of the business relating to our new possessions, which is divided principally between the War Department and this Department, and will continue to be so for an indefinite time. As the share of this Department in such business has been chiefly advisory, its work has largely escaped public attention; but from the beginning of the controversy with Spain, and even from the beginning of the insurrection in Cuba, there has been a great addition to the labors and responsibilities of the Department in connection with the possessions recently belonging to Spain and with the Hawaiian Islands. No less than sixty formal opinions have been furnished by the Attorney-General to the President and heads of Departments concerning questions arising in connection with these countries, in addition to opinions concerning such matters as the organization of the Army and Navy, prizes, etc. The letters, informal opinions, and other items of business attended to have been many times sixty. This business does not decrease, but rather the contrary. Of the sixty opinions, nineteen have been furnished, and several others will be furnished during the current year 1901.

It has been necessary to deal with the doings of people speaking foreign tongues, to interpret foreign laws, and to adjust to our system a multitude of affairs in strange and distant islands. That the work has been accomplished thus far by the present force of the Depart-

ment does not argue that it can wisely and thoroughly be carried on in that way. It was thrust upon the Department as a matter of urgent necessity, and was done because it had to be done and done at once.

It should be done now in a more orderly and deliberate manner, and by persons having little else to attend to, and able to listen to representations and become acquainted with the situation of our insular people, whose happiness and well-being during an indefinite future are affected by it.

The creation of many new judicial districts in the States has been brought about by and has in turn occasioned an increase of legal business in which this Department is concerned. In the old districts everywhere the growth of population and of trade has given rise to a like expansion of legal business. Judging from the past, a constant succession of unforeseen occasions for increased work by the Department will arise and require to be dealt with. And it should not be overlooked that our Territories upon the continent, and particularly the Indian Territory, Oklahoma, and Alaska since the development of gold mines in the Klondike region, have demanded and received in the last few years a vast amount of attention at the hands of this Department. Questions of exceeding difficulty have arisen from the peculiar situation into which the Indian Territory has of late been placed by legislation and agreements, and the wide extent and distance from our coast States of Alaska and its nearness to British possessions have necessitated the dealing with problems of equal difficulty.

The present force of the Department is little larger than it was fifteen years ago, and is fully occupied with work other than that concerning the islands and Territories. While the general correspondence has increased 150 per cent during these years, there has also been an increase in that of the different parts of the Department having separate files, as an example of which the disbursing clerk's office may be cited. For the fiscal year 1894 his disbursements were $258,007.19; in 1895, in consequence of the act of July 31, 1894, they had risen to $1,135,578.05; in 1900 they were $2,501,317.67; in 1901, $2,638,093.76, and for the present year they will amount to nearly $3,000,000. The checks issued in 1894 were 664; in 1895, 4,375; in 1901, 10,734. The registers of the Department show that there has been no increase in the force sufficient to make any of it available for the new demands of insular business.

I earnestly urge that the estimate for an insular and territorial bureau be favorably considered.

REFORM SCHOOL, DISTRICT OF COLUMBIA.

The report of the board of trustees of the Reform School of the District of Columbia (Exhibit L) shows that at the beginning of the last fiscal year there were in the school 192 boys; there were received dur-

ing the year 148, a total of 340, as against 309 for the previous year. There were discharged during the year 103, leaving in the school June 30, 1900, 237. In the last report it was shown that the average number of boys in the school, which in the years from 1887 to 1898 had increased from 157 to 236, decreased in 1899 and 1900 to 192, but the trustees thought it probable that the number would increase during 1901, owing to the passage of the act authorizing parole discharges and extending the limit of age for admission to the school to under 17 years instead of under 16 years. The figures given above show that this supposition was well-founded; the act works beneficially. The new assembly hall was completed, and its use is of great benefit to the school. I think that the school should be utilized as far as possible to the limit of its capacity by sending boys to it whenever circumstances seem to warrant such a course rather than the turning over of them to agencies intended more strictly for charitable work, and I agree with what the trustees say as to an additional family building.

REFORM SCHOOL FOR GIRLS.

The work of this institution has been much enlarged by the occupancy of the new building. White girls as well as colored girls of the classes defined by the law are now being received. The number of inmates is accordingly rising, and I have no doubt that the advantages of larger numbers in the way of reduction of per capita cost, and in other particulars of successful management, will soon be apparent. The health of the school continues to be good, and its general condition is progressing satisfactorily.

The trustees find that the buildings, with their completed equipment, are well adapted for their purposes, and report that modern appliances for the proper control and safety of the inmates have been installed.

Recent legislation, among other good results, has now been given to this school, as previously to the Boys' Reform School, the power to apply the modern principle of parole releases, which has been thoroughly tested and justified, especially in juvenile institutions.

I point out to Congress again, with my positive recommendation, the desirability of placing the Girls' Reform School on the same footing with the Boys' Reform School, by amending the organic act of this institution so that the approval required for appointments of officers and employees by the board of trustees shall be that of the Attorney-General rather than that of the Commissioners of this District. The Attorney-General is in immediate contact with the board of trustees and its officers, and he, rather than the District Commissioners, is charged with a certain supervision over and responsibility for this institution.

For further details respecting the school, I call attention to the

annual report of the board of trustees and its subsidiary reports, which will be found in the appendix to this report as Exhibit M.

LIBRARY.

The librarian calls attention (Exhibit I) to the fact that the library is deficient in legal periodicals, which form a very important part of a law library, and that he is unable to purchase them to any extent out of the current appropriation.

Each year the Attorney-General is obliged to ask for a deficiency appropriation for the purchase of law books. The amounts requested have always been granted, but I suggest that it would be better to appropriate the amount needed at one time. For the last two years the annual deficiency for this purpose has been $500, making a total of $2,250 for law books and $500 for session laws and statutes. I recommend that these amounts as given be appropriated, and that an annual appropriation of $250 be made for legal periodicals for the library.

EXHIBITS ACCOMPANYING THIS REPORT.

Exhibit 1 is a tabular statement showing the number of cases, civil and criminal, before the United States circuit courts of appeals during the fiscal year 1901, with the number disposed of.

Exhibit 2 is a report of the Assistant Attorney-General in charge of the business of the Government in the Court of Claims.

Exhibit 3 is a report of the Assistant Attorney-General in charge of Indian depredation claims.

Exhibit 4 is a report of the Assistant Attorney-General in charge of the business of the Government before the Spanish Treaty Claims Commission.

Exhibit 5 is a report of the United States attorney for the Court of Private Land Claims.

Exhibit A is a statement of the civil suits to which the United States is a party, terminated in the circuit and district courts of the United States during the fiscal year ending June 30, 1901, and of such suits pending in said courts July 1, 1901, as reported by the district attorneys.

In 1,050 of the 1,873 civil suits terminated during the last fiscal year judgments were for the United States; in 343 against the United States, and 480 were either dismissed or discontinued; 73 were appealed to the circuit court or to the circuit court of appeals, and 20 to the Supreme Court.

Many of the civil suits reported dismissed or discontinued were settled by authority of the Treasury Department and discontinued under its direction. There were pending July 1, 1901, 4,825 civil suits to which the United States was a party.

Exhibit B is a statement of the criminal prosecutions terminated in the circuit and district courts of the United States during the last fiscal year and of such prosecutions pending July 1, 1901.

Of the 16,837 criminal prosecutions terminated during the last year 201 were prosecutions under the customs laws, in which there were 138 convictions, 10 acquittals, and 53 were entered nolle prosequi, discontinued, or quashed; 5,265 under the internal-revenue laws, in which there were 3,099 convictions, 631 acquittals, and 1,535 were entered nolle prosequi, discontinued, or quashed; 1,269 under post-office laws, in which there were 841 convictions, 85 acquittals, and 343 entered nolle prosequi, discontinued, or quashed; 67 under naturalization acts, in which there were 51 convictions, 5 acquittals, and 11 entered nolle prosequi, discontinued, or quashed; 1,119 under the intercourse laws, in which there were 774 convictions, 47 acquittals, and 298 entered nolle prosequi, discontinued, or quashed; 288 under the pension laws, in which there were 153 convictions, 25 acquittals, and 110 entered nolle prosequi, discontinued, or quashed; 58 for embezzlement, in which there were 31 convictions, 9 acquittals, and 18 entered nolle prosequi, discontinued, or quashed; 8,570 miscellaneous prosecutions, in which there were 5,282 convictions, 883 acquittals, and 2,405 entered nolle prosequi, discontinued, or quashed.

In many of the prosecutions under the internal-revenue laws entered nolle prosequi, discontinued, or quashed a compromise and settlement were made in the Internal-Revenue Bureau of the Treasury Department.

Of the 9,944 criminal prosecutions pending July 1, 1901, 119 were for violations of customs laws, 3,673 for violation of internal-revenue laws, 629 for violation of post-office laws, 22 under the election laws, 65 under naturalization laws, 1,106 under the intercourse laws, 182 under pension laws, 143 for embezzlement, and 4,005 miscellaneous prosecutions.

Exhibit C shows the amount arising and realized from civil suits to which the United States was a party, and from criminal prosecutions in the circuit and district courts of the United States during the last fiscal year.

The aggregate amount of the judgments rendered in favor of the United States in civil suits during the last year was $530,469.08, and the amount actually collected on these judgments was $110,845.92, while $19,243.73 was obtained during the year on judgments rendered in former years for the United States, and $17,118.42 was otherwise realized in civil suits.

The aggregate amount of fines, forfeitures, and penalties imposed during the year in criminal prosecutions was $1,466,555.72, and the amount of these fines, forfeitures, and penalties collected during the year was $141,167.55, while $7,512.41 was realized on fines, forfeitures, and penalties imposed in former years.

Exhibit D is a statement of civil suits to which the United States was not a party, commenced and terminated in the circuit and district courts of the United States during the last fiscal year; and of such suits pending July 1, 1901, 11,400 were commenced during the year, and of which 2,051 were cases in admiralty and 9,349 were other miscellaneous suits.

Judgment for plaintiffs in these cases were as follows: Six hundred and sixty-nine in admiralty, amounting to $800,794.43, and 4,059 in other suits, amounting to $59,712,264.28.

Judgments for defendants were 89 in admiralty, amounting to $7,450.48, and 893 in other suits, amounting to $1,859,999.58; 766 in admiralty were either dismissed or discontinued, as were also 4,915 other suits; 39,693 civil suits, to which the United States was not a party, were pending in the district and circuit courts of the United States July 1, 1901, viz, 4,874 in admiralty and 34,819 other miscellaneous suits.

Exhibit E is a general statement of all appropriations placed under the Department of Justice which were available, and those from which payments were made during the fiscal year ending June 30, 1901.

Exhibit F 1 is a statement of the court expenses incurred in the fiscal year 1899 and paid in the fiscal year 1901.

Exhibit F 2 is a statement of the court expenses incurred in the fiscal year 1900 and paid in the fiscal year 1901.

Exhibit F 3 is a statement of the court expenses incurred and paid in the fiscal year 1901, viz:

To United States marshal	$1,175,551.89
To attorneys and assistants	559,533.42
To special assistant attorneys	38,703.88
To clerks	152,670.21
To jurors	677,127.80
To witnesses	885,932.50
To commissioners	90,149.50
To prisoners	655,402.35
To rent	76,671.19
To bailiffs	165,860.75
To miscellaneous expenses	262,929.28
Total	4,740,532.77

Exhibit F 4 is a statement showing items, amounts, cause of expenditure, and persons paid from the appropriation for contingent expenses, Department of Justice, including the appropriations for furniture and repairs, books for Department library, books for office of the Solicitor, stationery, official transportation, and miscellaneous items.

Exhibit G shows the number of special assistant attorneys and the compensation paid each, as required by sections 195 and 385, Revised Statutes.

Exhibit H is the report of the Solicitor of the Treasury, showing

the amount, character, and results of the litigation under his direction for the fiscal year ending June 30, 1901.

Exhibit I is the report of the librarian of the Department.

Exhibit J is a detailed statement giving names of the institutions where United States prisoners are confined, their location, and the number of convicts in each.

Exhibit K is the report of the warden of the United States penitentiary at Fort Leavenworth.

Exhibit L is the annual report of the president of the board of trustees of the Reform School of the District of Columbia for the fiscal year ending June 30, 1901.

Exhibit M is the report of the president of the board of trustees of the Girls' Reform School of the District of Columbia for the fiscal year ending June 30, 1901.

Exhibit N is the annual report of the warden of the United States jail in the District of Columbia.

Exhibit O is a report of the Architect of the Capitol upon the improvements and repairs to the court-house, District of Columbia, during the fiscal year ending June 30, 1901.

Exhibit P is a report of the attorney in charge of pardons, Department of Justice, showing the names of the prisoners convicted in the United States courts who were pardoned during the fiscal year ending June 30, 1901, the districts in which they were tried, the term of court at which they were convicted, their offenses, sentences, dates of pardon, and the principal reasons for recommending Executive clemency.

Exhibit Q is a report of the special attorney in charge of matters relating to the Mission Indians.

Exhibit R is a statement showing by districts the annual salaries of United States district attorneys, their assistants and clerks, and the expenses claimed and approved by this Department for the fiscal year 1901.

Exhibit S is a statement showing, by districts, the salaries paid to United States marshals, their deputies and clerks, their expenses of travel and subsistence, as claimed and approved, and the fees earned and compensation payable out of said fees, as claimed and as approved, together with amounts paid to clerks of United States courts for deposit for the fiscal year 1901.

Exhibit T is a statement showing emoluments and office expenses of clerks of the United States courts, as indicated by their emolument returns, for the fiscal year ending June 30, 1901.

Exhibit U is a report on bankruptcy matters.

Exhibit V is the report of the attorney-general of Porto Rico.

Exhibit W is a summary of the laws of the States as to commutation of sentence.

The exhibits are a part of this report.

P. C. KNOX,
Attorney-General.

REPORT

OF THE

SECRETARY OF AGRICULTURE.

To the President:

The Department of Agriculture has reached farther into sympathy with the industries of the people during the past year. It has identified itself more intimately with the experiment stations of the several States and Territories and what pertains to the interests of their people. It has gone farther in foreign lands to find many things that will be valuable to our producers. The grouping of related sciences into Bureaus has economized time and contributed to efficiency. The process could be advantageously extended to other Divisions and Offices that are growing beyond their present environment.

The education of student assistants and scientific aids in their several specialties goes on satisfactorily under the scientists in charge, giving promise of high efficiency in the future personnel of the Department.

NEW BUILDING NEEDED.

The growth of the Department causes continual overflow into rented buildings that now cost over $10,000 a year. This, and the danger of loss by fire of material that has been accumulating for years and could not be replaced, induced the Congress to appropriate $5,000 at its last session to provide for the selection of an architect and plans for a new building, which has been done with the cooperation of the Architect of the Treasury, under whose direction a commission was selected to pass upon the drawings, consisting of Messrs. D. H. Burnham, C. F. McKim, Augustus Saint Gaudens, F. L. Olmsted, jr., and James Knox Taylor, and a report upon the action taken will be submitted to the two Houses of Congress at an early date.

OUR DUTY TO NEW POSSESSIONS.

The extension of American jurisdiction over islands in the Tropics brings new problems to the student of agricultural science. We buy annually over $400,000,000 worth of the products of foreign fields,

one-half of which will, at no distant period of time, be grown in the United States; the other half is the product of such climates as prevail in our new island possessions. It is the privilege and duty of the Department of Agriculture to teach the people of those islands to produce what we now buy from tropical countries, that they may have incomes to help toward their growth in all desirable directions.

The topics discussed in the reports of the Bureaus, Divisions, and Offices of the Department are indicated in the following brief paragraphs:

SUMMARY.

THE WEATHER.—The Weather Bureau has established cooperation with Europe in the interchange of weather forecasts. The farmer in the country is receiving his weather forecasts with his mail through rural free delivery. Progress is being made in perfecting wireless telegraphy.

ANIMAL INDUSTRY.—Our animals are the healthiest in the world, and the people at home and abroad are protected by the inspection of meats in 51 cities and 156 abattoirs. Exports of animals and animal products amount to $253,000,000. Imported animals are inspected. Animal diseases are being eradicated by serums and vaccines sent out from the Department. State restriction of interstate traffic in live stock is in the courts.

PLANT INDUSTRY.—The diseases of cotton and other plants are being investigated. Plant breeding to obtain forms that will resist disease and be better adapted to new and changed conditions is being successfully carried on. A new method of cultivating and distributing the seeds of bacteria that cooperate with leguminous plants in developing nitrogen has been discovered. Antidotes for many poisonous plants have been found. Improved methods of curing grass seeds have been put in operation. Experiments with clover seeds show the superiority of the American over the foreign kinds. Tropical agriculture is being studied and the people of our island possessions are being taught better methods of growing coffee and other plants. The improvement of grasses on the Western ranges is being studied. Cooperation is had with most of the experiment stations about the country. Markets for our fruits are being successfully opened in foreign countries. The hop, prune, and other industries of the Pacific coast are being helped by the Department's investigations and importations. The Arlington farm is being brought into condition for use. Satisfactory results are being obtained from tea cultivation. Macaroni wheats are being successfully grown in our semiarid localities. Superior barleys for commercial purposes have been introduced. Egyptian cottons are being successfully grown, and the importation of the date palm has been a success. The Congressional seed distribution has been reorganized.

SOILS.—The Bureau of Soils is a necessity to find suitable soils for the new plants introduced, as well as the soils most suitable for our staple crops. Sumatra tobacco is being successfully grown in the Connecticut Valley and in Florida. Experimentation is being conducted in Pennsylvania in the growing of Havana filler tobacco, and this will be extended to Ohio, Texas, and the island possessions. The growers of the several fruits, table vegetables, and sugar beets, both

East and West, are being helped by the finding and mapping of suitable soils. Soil surveys are of benefit to Western irrigated districts. State organizations are cooperating in soil investigations, and these will be extended to the island possessions to help them in producing what can not be grown in the United States. Extensive areas of alkali lands in the mountain States are being reclaimed in cooperation with the Bureau of Soils. New processes of tobacco fermentation avoid losses by black rot.

CHEMISTRY.—The composition, nutritive value, and adulteration of food products are inquired into, and extensive work is done in the study of food preservatives. Much work has been done in the investigation of the adulterations of imported food products, and the results will soon be given to the public. The chemistry of woods is studied in cooperation with the Bureau of Forestry. A special study is made of the problems relating to sugar-producing plants. The physical and chemical study of road materials is now established in the laboratory. Work is done in the laboratory of this Bureau for all Departments of the Government.

FORESTRY.—The study of forests, forest fires, forest grazing, commercial trees, lumbering, and forest products for the Federal and State governments and for private individuals is included in the work of this Bureau. Tree planting for wood lots, shelter belts, and commercial plantations is a prominent feature. Assistance is given to the Interior Department in the study of the scientific work of the forest reserves. This Bureau is getting into close touch with all the forest interests of the country. Over 52,000,000 acres of forest lands throughout the United States are under its consideration. Commercial lumber companies in all parts of the country are asking help in the management of their properties. An Appalachian forest reserve, to protect the headwaters of important Southern streams, is recommended. Investigations to improve the methods of turpentine orcharding are being conducted.

EXPERIMENT STATIONS.—Inquiry shows that the experiment stations of the several States are working in the interest of their respective localities. Satisfactory progress is being made and the States are more liberal in helping the stations. The Department of Agriculture is cooperating extensively with the stations. Satisfactory reports come from the work in Alaska, which the people there are appreciating. Progress is being made in the establishment of experiment stations in Hawaii and Porto Rico, and there is much need of a beginning in the Philippines. Improvement is suggested in agricultural education. The farmers' institute work might be assisted. Interest grows in the study of the nutrition of man. Economy in the feeding of the human family would promote health and save money.

Irrigation.—The irrigation laws of the States have been studied and investigations made of the methods by which water is conserved, distributed, and used. The titles to water should be better understood and the disposal of water should be safeguarded. The Department's investigation is suggesting the enactment by the States of new and more intelligent legislation. The people interested should sanction all innovations, and they should be helped to do what localities can not do. Extensive irrigation works, such as the damming of large rivers, should be built by the Federal Government.

ENTOMOLOGY.—This Division has completed its work with the fig-fertilizing insect and has written up its history. Probably 75 tons of figs fertilized in this way will be put on the market this year. The original home of the San Jose scale has been found, after long investigation in the Orient, to be in northern China. The beetle that preys upon it is being brought in considerable numbers to the United States for distribution to orchards. The scale was found near the Great Wall, where no foreign nursery stock of any kind had ever been introduced. Its natural enemy keeps it in such check there that the native fruits grow successfully. After eight years of effort success has been reached in the introduction into the United States of a caterpillar from Italy that preys upon the black scale, a serious enemy to olive and citrus trees in California. This scale is a native of the region from which the caterpillar has been introduced, and along the shores of the Mediterranean the latter keeps the scale in subjection. A beetle has been introduced from Hungary that is a natural enemy to several destructive plant lice which have been accidentally imported into this country from Europe. A fungous disease of grasshoppers has been imported from South Africa and experimentally used in different parts of the United States through the summer of 1900–1901. In some localities it appears to have taken hold successfully.

Other work of this Division may be summarized as follows: During the past year the insects affecting the violet, the rose, and other ornamental plants have been studied. Work has been done in cooperation with the Bureau of Soils looking to the eradication of mosquitoes. A study of flies has indicated the importance of these creatures in the carriage of internal diseases. Systematic work is being projected to deal with the cotton-boll weevil of Texas.

PUBLIC ROADS.—This Office studies the condition of the roads, publishes information with regard to their improvement, the obstacles in the way, and the best means of securing better highways. Object-lesson roads have been built in nine States during the past year. The laboratory for testing the chemical and physical properties of road materials, conducted under the direction of the Bureau of Chemistry, has been in successful operation during the year. An agent of the Department is located in each of four geographic subdivisions of the United States to study and report upon local conditions.

PUBLICATIONS.—The work of this Division affords a fair reflex of the activity of the Department. During the year 1901 there were issued 606 publications, aggregating nearly 8,000,000 copies. Of these, 3,345,000 were Farmers' Bulletins. The Yearbook of the Department continues to be in great demand. Many of the Department's agents throughout the country receive no compensation except copies of our publications. A larger number of the Yearbook should be assigned to the Department. The publications of this Department are in demand among the people. The agent who sells governmental documents shows that during 1901, 24,127 copies of publications from this Department were sold, as against 9,458 from all other Departments. Congress at its last session greatly increased the number of Farmers' Bulletins to be printed and furnished to Members. A sufficient amount of money for their publication and distribution was not appropriated.

FOREIGN MARKETS.—Agriculture contributed conspicuously to the expansion of American commerce during the past year. The highest

record attained in the exportation of agricultural products previous to last year was surpassed by more than $90,000,000 for the fiscal year 1901, when a value of over $950,000,000 was reached. Fully 65 per cent of domestic merchandise sent abroad during that year originated on the farm. The most important foreign markets for our surplus products are in the United Kingdom, Germany, France, the Netherlands, and Belgium. We sent to Cuba, Porto Rico, and the Philippine Islands in 1901, $18,600,000 worth of exports, being about 53 per cent of their receipts in those islands. They are increasing in Porto Rico and the Philippines and declining in Cuba. Our imports from these three island groups increased from $36,162,000 in 1900 to $48,600,000 in 1901, the bulk of the gain being in the imports from Cuba. Of the $70,000,000 worth of domestic merchandise exported from the Pacific coast during the fiscal year 1900, $45,000,000 worth consisted of farm produce.

Library.—We have the most extensive agricultural library in the country. Four thousand books and pamphlets were added during the past year. Reference lists with regard to publications on land drainage, tobacco, etc., have been prepared. The constantly broadening field of investigation makes increased demands upon the Library, and it is necessary that our scientists have access to the work done at home and abroad. The agricultural colleges and experiment stations are drawing upon the resources of the Library to assist them in special work. An increased appropriation to permit of the engagement of scientific aids in library work is much needed. The Library room, like the other quarters of the Department, is entirely inadequate.

Accounts and Disbursements.—Congress appropriated $3,303,500 for the Department for the fiscal year ended June 30, 1901. Final payments will amount to about $3,200,000. Owing to inadequate accommodations in the Department proper, our rentals for outside buildings for the fiscal year 1902 will exceed $10,000.

Biological Survey.—This Division is engaged in mapping the boundaries of the natural crop belts of the country, and aims to furnish the American farmer with lists of crops likely to succeed in different parts of the country. The work has been done in Texas and California to a great extent during the past season. A fiber plant has been discovered that grows over 20,000 square miles of land in Texas, and the Biologist thinks that the fiber of this plant may take the place of over $12,000,000 worth of the fiber of other species of agave annually imported, mostly from Mexico. The fog zones of California mostly run north and south, owing to the trend of the mountains, and interesting deductions for fruit growers are reached. The prairie dog of the great plains that stretch from Montana and the Dakotas into Texas is increasing rapidly, owing to the destruction of its natural enemies, to the serious injury of pasture grasses. Field experiments are being conducted looking to its destruction.

Observation of birds in southern California shows that two of them feed extensively on the olive scale. The large blackbirds of southern Texas that feed on crayfish which cut the rice plant and on the cabbage worm have been slaughtered in great numbers for the millinery trade. These studies in ornithology have a direct bearing upon crop production. Farmers' Bulletins on these topics are being distributed in large editions. This Division is charged with the supervision of

matters relating to game protection and introduction and executes the Lacey Act. It gives permits for the importation of birds and supervises their movement in interstate commerce. This service will be extended to Hawaii in the coming year. More liberal appropriations are required to carry on the valuable work of the Biological Survey.

STATISTICS.—The Division of Statistics has 250,000 reporters located throughout the United States, who furnish facts monthly regarding the crops. Its work consists in the preparation of reports relative to the principal products, the condition and prospects of the crop during the growing season, and the quantity, quality, and disposition of the product harvested. There is urgent necessity for extending this work to other products, such as live stock, fruits, sugar, rice, etc. Agents are already organized to collect the facts, and only the addition of a sufficient number of compilers to collate and analyze these facts is necessary to the extension of the work. Negotiations with foreign governments, looking to the telegraphic interchange of crop reports, have been undertaken. The statistician has had marked success in estimating the cotton and other crops during the last few years.

WEATHER BUREAU.

NEW OCEAN FORECASTS AND INTERNATIONAL COOPERATION.

An important extension of the forecast work of the Weather Bureau has been made during the year. By an arrangement with the secretary of the meteorological office at London, England, the transmission by cable from London to Washington of meteorological reports from certain points in the British Isles and on the Continent of Europe, and from Ponta Delgada, Azores, was begun December 18, 1900. These reports, with observations from Nassau, Bermuda, and Turks Island, have been regularly published on the daily weather maps issued at Washington, Baltimore, Philadelphia, New York, and Boston, together with forecasts of the force and direction of the wind and the state of the weather for the first three days out of steamers bound east from American ports.

The Atlantic forecasts, which are based on the American, Atlantic, and European telegraphic reports, were begun January 7, 1901, and on June 1, 1901, they were made a part of the regular general night forecasts issued at Washington. In a number of instances, when storms of marked strength were passing eastward off the American coast, forecasts were issued of the character of the weather which would probably be experienced by steamers leaving European ports westward bound, and by an arrangement with Lloyd's, of London, these advices have been cabled to England.

In addition to the daily forecasts of wind and weather and special storm warnings, predictions of fog have been issued when conditions favorable for fog development have been indicated in the steamer tracks west of the fiftieth meridian. Reports from trans-Atlantic

steamships show that these forecasts and special warnings have been well verified.

In November, 1900, arrangements were made with Portugal to receive reports from the meteorological observatory at Horta, in the Azores. Observations are now regularly received by cable from that place, and they are of much value in the work of forecasting the movements of storms on the Atlantic Ocean.

THE GALVESTON HURRICANE.

The principal storm of the year was the West Indian hurricane which devastated Galveston, Tex., September 8, 1900. This was one of the most destructive storms on record. Upward of 6,000 human lives were lost, and property to the estimated value of $30,000,000 was destroyed.

The wisdom of Congress in appropriating for the establishment of weather stations in the West Indies was well demonstrated by the warnings that were issued well in advance of this storm, from the time of its inception in the Caribbean Sea to its arrival at Galveston, and thence throughout its course to the Great Lakes and onward to the Atlantic Ocean.

NEW FORECAST DISTRICTS.

Three additional forecasting districts have been established and designated as the New England district, the West Gulf district, and the Rocky Mountain district, with headquarters at Boston, New Orleans, and Denver, respectively. The last appropriation bill passed by Congress made provision for three additional forecast officials to be placed in charge of these districts with authority to issue forecasts and warnings for the several States that are comprised in each district. This system has the advantage of enabling the forecaster to devote more time to the consideration of the predictions for each State and of securing an earlier distribution of forecasts. As these forecast officials were selected on account of their ability as forecasters for their respective sections, it is expected that an improved service will result.

IMPROVEMENT IN FORECASTS.

Special consideration has been given to the subject of increasing the accuracy of the forecasts of the Weather Bureau to the highest degree attainable, and as a means of stimulating among the employees of the Bureau the study of the problems of weather forecasting announcement has been made that hereafter marked success in forecasting, the invention of new methods of forecasting, or the discovery of new facts

or principles of marked value to the forecaster will have a special weight in considering the merits of employees of whatever grade for promotion.

RECENT EXTENSION OF WEATHER SERVICE.

It is a wonderful picture of atmospheric conditions that is now presented twice daily to the trained eye of the weather forecaster. In addition to the reports from Europe, the Azores, and Bermuda, the field embraces an area extending from the Atlantic to the Pacific, from the north coast of South America over Mexico, the islands of the West Indies and the Bahamas, northward to the uttermost confines of Canadian habitation. It is a panoramic picture of the exact air conditions over this broad area that is twice daily presented to the study of our experts. Hurricanes, cold waves, hot waves, or rain storms are shown wherever present in this broad area. Their development since last report is noted, and from the knowledge thus gained their future course and intensity is quite successfully forecast. Every twelve hours the kaleidoscope changes, and a new graphic picture of weather conditions is shown. Nowhere else in the world can meteorologists find such an opportunity to study storms and atmospheric changes.

CLIMATE AND CROP WORK.

The lines of work pursued in previous years by the climate and crop service of the Weather Bureau were continued and extensions and improvements made wherever possible. The cotton-region service has been extended into Oklahoma and the Indian Territory, and arrangements have been made for inaugurating a similar work in California, to be known as the fruit and wheat service.

FORECASTS TO FARMERS BY RURAL FREE DELIVERY.

Particular attention has been given to the distribution of forecasts by means of the rural free delivery. There are now in operation 365 centers, supplying an aggregate of nearly 42,000 families in the farming districts with the latest weather predictions. This work has become decidedly popular, and we have had the hearty cooperation of the Post-Office Department in making it a success. With some additional appropriation, it is the intention to reach several hundred thousand farmhouses with the daily forecasts and warnings during the coming year. The value of frost and cold-wave warnings to rural communities is beyond estimate, and the rural free delivery of the Post-Office Department places the means at our command of reaching those who can be the most benefited by these warnings.

WIRELESS TELEGRAPHY.

The vast extent of our sea and lake coasts and the intimate communication between the Weather Bureau stations of this Department, which are distributed along these coast lines, and the vessels of commerce have induced me to authorize persistent and systematic experimentation in etheric space telegraphy. Substantial improvements have been made during the past year in the Department's system.

The line of research has been divided into three classes: First, the perfection of a more powerful transmitter, in which the energy of radiation shall be greatly increased; second, the devising of a more delicate receiver—one that would be positive instead of depending upon an imperfect and variable contact, as do all systems now in use; and, third, the perfection of a system of selective telegraphy whereby messages may be differentiated and only the receiver that it is desired shall receive the message may become responsive to the waves of ether.

The first of these problems may be said to have been successfully solved, and a transmitter devised capable of radiating all the energy generated. The second is believed to be nearing a successful solution. The third is thought to be well demonstrated theoretically, but has not been fully tested in practice.

While there is much experimental work yet to be done before the present system is reliable for intership communication, or before any two systems can work within the same field without each rendering the other useless, such progress has been made by the Government experimenters that, with no interference by private systems, stations can be successfully operated over at least 150 miles of coast line, and they are now in operation on the North Carolina and Virginia coasts, and soon will be instituted between the Farallone Islands and the mainland and Tatoosh Island and the mainland, on the Pacific coast.

THE MERIT SYSTEM AND THE DISCIPLINE OF THE WEATHER BUREAU.

The merit system of the Weather Bureau conforms to the letter of the Civil-Service law and carries its spirit to a rational and beneficent conclusion. The duties of this Bureau are exacting. It requires a strict discipline to administer a service with such extensive ramifications and have every man at his post of duty at exactly the same moment of time, and to do this several times each twenty-four hours, as is necessary in the gathering and the charting of simultaneous weather observations and in the rapid dissemination back to the country of the forecasts and warnings based upon the observations.

A system of merit and discipline has gradually become fixed in the Bureau. The system is fair. It enables honest and efficient officials to

work themselves upward without placing themselves under obligations to anyone. It contributes to a high standard of manly character and to efficiency in public office.

BUREAU OF ANIMAL INDUSTRY.

Our animal industry, which has been most remarkably developed both as to numbers and values, has experienced great prosperity. There has been an active market for animals and animal products at satisfactory prices. In no other large stock-raising country have animals been so free from disease. It is the function of this Department, through the Bureau of Animal Industry, to foster and assist this branch of agriculture by distributing information, by protecting it from both imported and indigenous contagion, by inspecting animals and meats for the interstate and foreign trade, and by certifying that exported meats are wholesome and that animals are free from contagion.

ANIMAL EXPORTS.

Under this intelligent and helpful supervision there were exported last year animals valued at more than $52,000,000, meats valued at more than $113,000,000, animal fats and oils valued at more than $66,000,000, dairy products valued at nearly $9,500,000, and miscellaneous animal products valued at more than $12,000,000. The grand total of animals and animal products exported during the year amounted to nearly $254,000,000.

INSPECTION SERVICE FOR EXPORT ANIMALS.

Out of a total of 459,000 cattle exported, there were inspected, marked with numbers for identification, and certified 385,000. The remainder were shipped in small lots from ports where no inspection is maintained and to countries which do not require inspection. The number of sheep exported reached about 298,000 head, and of these 228,000 were inspected before shipment. The horses and mules constituted the second largest item in the exports of live animals, the number being 116,500 and the value about $8,900,000. Of these, nearly 48,000 were inspected and certified. There was a notable increase in the number of cattle and sheep exported, the former being greater than any year since 1898 and the latter the largest since 1896. There was a decline in the exports of horses.

The inspection of steamships which is made in connection with the inspection of export animals has been conducted with a view to securing strong and reliable fittings properly fastened to the decks, adequate ventilation, alleyways sufficiently wide to enable attendants to perform their duties in all kinds of weather, and, in general, such arrangements and management as would insure humane treatment and

land our animals in the best condition for market. The percentage of loss in ocean transit has been reduced to 1.72 for horses, 0.91 for sheep, and 0.24 for cattle. During the past year notable improvements have been obtained in the ventilation and width of alleys, and it is believed that the losses have reached almost the lowest attainable point. The number of clearances for vessels which were inspected and passed was nearly 1,000.

INSPECTION SERVICE FOR IMPORT ANIMALS.

In order to prevent the introduction of animal plagues an inspection service is maintained at our principal seaports and along our frontier. Quarantine stations have been established for animals coming from countries where contagious disease exists. There were quarantined at these stations during the year 559 cattle, 525 sheep, 81 swine, and 118 animals for menageries and zoological parks. There were also admitted, after inspection and in some cases quarantine, over 242,000 animals from Canada and about 100,000 from Mexico. The examination of this vast aggregate of imported animals, amounting in all to over a third of a million, is a most responsible task, but so far it has been successfully conducted, and none of the exotic plagues of the domesticated animals has been allowed to reach our territory. With our enormous investment in animals that are susceptible to such plagues, it is clearly a duty which the Government owes to our stock raisers to maintain this inspection and quarantine with the utmost rigidity. The ravages of the rinderpest as it is sweeping over the African Continent should be an object lesson indicating the terrible destruction which such a disease would cause among our immense herds of valuable stock.

The tremendous possibilities of loss from imported contagion suggest that possibly the time has come when it might be well for us to consider whether it would not be best for us to follow the example of Great Britain and exclude entirely live stock from other countries. Inspection and quarantine, however carefully and conscientiously performed, are acknowledged by most countries to be only a relative and not an absolute guaranty of protection. Should not our animal industry have the most complete safeguards thrown around it which the experience of the world has shown to be required for the most absolute and perfect protection? In this connection, we are reminded that some of the territory which has recently come under our flag is believed to be infected with animal plagues and parasites unknown to the United States, and that may work great injury if they are transported to our soil. It would appear to be wise for such legislation to be enacted as would provide against animals from this territory being allowed to enter our ports, whether these animals are brought by individuals or returning troops.

TUBERCULIN TEST FOR IMPORTED CATTLE.

The reported increase of bovine tuberculosis in most countries, and the losses already sustained from the disease in the United States, led me to make an order requiring a tuberculin test of cattle imported for breeding or dairy purposes. The application of this test has detected a sufficient number of diseased animals to fully justify its adoption. In fact, more animals have reacted than was anticipated, and in order to save importers from heavy loss it has been necessary to provide for this test before animals cross the frontier from Canada, and to send an inspector to Great Britain to make the tests and reject affected animals before shipment. In the tests which have been made it is not believed that any animals have been injured by the tuberculin or that any have reacted which were not tuberculous. The welfare of the live-stock interests requires the continuance of this method of inspection.

MEAT INSPECTION.

The meat-inspection service has grown to proportions commensurate with the live-stock industry. It is now maintained in 51 cities and at 156 abattoirs. Nearly 37,000,000 animals were inspected at time of slaughter. This is an increase over the preceding year of 6 cities, 8 abattoirs, and 2,300,000 animals. Although in the aggregate a large number of carcasses were condemned, the percentage has been extremely small. In nearly 5,250,000 cattle inspected the condemned carcasses amounted to only about one-fourth of 1 per cent; in 6,500,000 sheep it was about one-tenth of 1 per cent, and in 24,250,000 hogs it was but one-third of 1 per cent.

The larger part of the inspected meat, as might be anticipated, went into interstate commerce and was consumed in the United States, but there were exported under Department certificates 452,830,373 pounds of beef, 894,648 pounds of mutton, and 231,144,938 pounds of pork. The microscopic inspection of pork was maintained during the year, but owing to the comparatively high prices in this country there was a considerable decrease of exports in this line of products, but 35,942,404 pounds having been certified for countries requiring such inspection.

CONTROL OF INDIGENOUS DISEASES.

There are a few diseases which are more or less distributed over our territory and which require constant supervision and control. One of the most important is Texas or malarial fever of cattle. This disease, owing to the thorough knowledge of it which has been developed by our investigations, no longer has terror for our stockmen. The thorough control now exercised over cattle shipments from the infected area is an almost complete protection, but it must be kept in constant operation to be successful. Nearly 1,500,000 inspections were made

in this service, and 45,400 cars were disinfected. It is hoped through intelligent effort to considerably reduce the area now infected with this contagion.

Much attention has also been given to the repression of scabies in sheep. The number of animals inspected in this service was nearly 8,000,000, and over 1,000,000 were dipped in a proper liquid for the cure or prevention of the disease under the supervision of our inspectors. The effect of the regulations bearing upon this disease has been remarkably beneficial, the number of diseased sheep reaching the markets of the country having been greatly reduced.

One of the most common diseases of cattle is known as blackleg—a malignant and fatal swelling which appears frequently in one of the limbs, causing great discoloration of the affected parts. The only means of combating this disease is by vaccination, and to assist our stock raisers more than one and a half millions of doses of the vaccine have been distributed. This is an increase of more than 50 per cent over the previous year. The demands for this vaccine have been most urgent, and it is evident that its preparation and distribution have been of great benefit. The reports show that the losses have been reduced to less than 1 per cent in affected herds, whereas formerly they were in most cases 10 per cent or more.

Tuberculin and mallein have also been prepared and distributed to State and other local authorities to aid them in detecting tuberculosis in cattle and glanders in horses. The assistance thus rendered has enabled much work to be done locally for the control of these diseases which otherwise would not have been possible. More than 44,400 doses of tuberculin and 7,000 doses of mallein have been thus supplied.

There are several lines of work which might still be taken up with much benefit to stock raisers in certain sections of the country. Cattle for improving the blood of the herds of our Southern States can only be taken there safely after inoculation with the germs of Texas fever. The Missouri Agricultural Experiment Station has had the enterprise to undertake the inoculation of cattle which the breeders of that State desired to ship to the infected area, and the Texas station has also done good work along this line. It was first shown by this Department that such inoculation was a practicable method of prevention, and in the interest of the large section of the South which needs inoculated stock and at present can not obtain it the Bureau of Animal Industry should undertake to thus treat animals which are intended for interstate shipment. There has also been witnessed a considerable outbreak of anthrax in the southern Mississippi Valley, and the Department has been unable to give aid, notwithstanding most urgent appeals. This disease may likewise be prevented by a reliable vaccine, but the facilities and appropriations now available will not permit this work to be undertaken.

PATHOLOGICAL INVESTIGATIONS.

Investigations of numerous diseases have been in progress. Much work has been done with a view to the discovery of some more effectual method of controlling hog cholera than has yet been devised. Tuberculosis has been investigated to learn more about the proportion of affected animals which produce infected milk, and to determine whether bovine tuberculosis is communicable to man. Other interesting and important diseases of horses, cattle, sheep, and poultry have been investigated in order to assist the inspection service in its work or to grant relief in outbreaks to which the attention of the Department has been called. In the treatment and cure of parasitic diseases of sheep and of an eruptive skin disease seriously affecting the heads of these animals, valuable discoveries have been made, which are immediately available for the relief of the sheep industry. Other discoveries as to the nature of several diseases have been made which can not be described at this time.

STATE RESTRICTIONS ON THE INTERSTATE LIVE-STOCK TRAFFIC.

Inspection laws and regulations are enforced in a few States, which duplicate the inspection made by the Bureau of Animal Industry of animals which are shipped from one State to another. In addition to the inspection, some of the States demand inspection fees which constitute a serious burden on this branch of interstate commerce. This inspection and tax is not confined to cattle which are certified by the Federal inspectors and which are destined for the State making the inspection, but in some cases has been applied to animals simply shipped across the territory of a State and destined for some other section of the country. The enforcement of such a policy is contrary to the interests of the country as a whole, and is a reversion to the system of taxing interstate traffic, which became so vexatious in the period before the adoption of our Constitution. If generally sanctioned by the States it would prevent the marketing of live stock from some sections; it would absolutely prohibit shipments across the country, as from Massachusetts to California, and it would destroy much of the usefulness of the Federal inspection and certification, which has become of such value and which has been established by Congress to insure fair treatment and facility of shipment to all sections of the country. So menacing is the present situation to the great cattle industry of the Southwest and West that I have requested the Attorney-General of the United States to cooperate in bringing the matter promptly before the Supreme Court for decision as to the constitutionality of these State laws. It is a matter for congratulation that this request has been favorably received and that the assistance of the Department of Justice is promised, with a view to obtaining an early adjustment of this serious question.

BUREAU OF PLANT INDUSTRY.

The Bureau of Plant Industry was one of four Bureaus organized during the year in accordance with an act of the last Congress. The advantages of bringing together the allied lines of work in the Department were pointed out in my last report, and already good results have been secured by following the policy there laid down. Congress authorized the bringing together of the plant physiological and pathological investigations, the botanical investigations, the grass and forage plant investigations, the work on pomology, and the experimental gardens and grounds; and during the year the Arlington experimental farm, the investigations in the production of domestic tea, the work on foreign seed and plant introduction, and the Congressional seed distribution have been added by executive order, making nine branches in all. The unification of work and the advantages resulting from close cooperation and perfect elasticity to all branches composing the Bureau as at present organized prompt me to urge that Congress take proper action toward broadening all lines, as provided for in the estimates for the next fiscal year. As at present constituted the Bureau has a corps of more than 200 efficient workers, and nowhere else in the world are so many important plant problems being studied. The past year has been marked by important advances along many lines, a few of which may be noted here.

PLANT PHYSIOLOGY AND PATHOLOGY.

The field of plant physiology and pathology is an exceedingly broad one, involving, as it does, a study of normal plant life on the one hand and abnormal conditions on the other. Although this work is comparatively new, its advances have been rapid, especially during the past three or four years, largely as a result of the work done by the Department. The great aim of all this work is to make it reach the farmer, and to do this it is essential that the practical features should always be kept in mind. Following are some of the practical results obtained in the past year, showing the bearing of this work:

WORK ON COTTON DISEASES.

Cotton is subject to many serious diseases, some of which cause immense annual losses. These losses are not evenly divided, but fall with crushing effect upon individual growers and communities. In the sea-island region, where the fine grades of sea-island cotton are produced, hundreds of acres, including many fine farms, have been rendered worthless for cotton by a disease known as wilt. This is due to a fungus parasite in the soil, which for several years has been spreading slowly but surely throughout the cotton areas of the Southeast. Every attempt to kill this fungus in the old way, by treating

the soil and plants with fungicides, failed, hence attention was turned to the problem of obtaining a form of cotton which, through its own inherent vitality, would be able to resist the disease. The clew to this had already been noted in the fact that individual stalks here and there in a field of cotton would resist the attack, and this suggested the plan of selecting seed from such resistant stalks, thus gradually securing a form which would be immune. This has been accomplished, and it is planned to extend the planting of the resistant sorts as rapidly as the work can be pushed.

In this connection, another interesting and valuable discovery has been made in the matter of securing also a resistant cowpea. The cowpea is used in rotation with cotton, and it was also attacked and killed by the same fungus which destroyed the cotton roots. The securing of a resistant cowpea will make it possible for the growers of the fine sea-island cotton to bring back their land to its once high value.

DISEASES OF ORCHARD FRUITS.

The peach in this country has generally been a very profitable crop, but for many years it has been subject to a number of serious diseases. Some of these can now be controlled, notably "yellows" and peach-leaf curl, two of the worst enemies of peach growers. A few years ago a new disease appeared in some of the finest peach orchards of New York, Michigan, and other States, and this trouble has caused growers a great deal of uneasiness. The Department has had one of its most competent experts engaged on the disease, and he believes that he has discovered the cause. The disease in question is known as "little peach," from the fact that the fruit ripens when very small, this symptom becoming more pronounced each year until the tree dies, which it invariably does at the end of two or three years. The cause of "little peach" is believed to be a fungus which attacks the very young roots, and already the matter of preventing it by securing resistant stocks has been taken up.

DISEASES OF FOREST AND CONSTRUCTION TIMBER.

The losses due to the rotting of forest timber and timber used for construction material, such as railroad ties, bridge sills, etc., have been great, and an increasing demand has been made for information that would lead to more light as to the best methods of preventing such losses. During the year a thorough investigation of this subject was inaugurated, the work being undertaken in cooperation with the Bureau of Forestry. An expert was sent to Europe to secure information as to the methods employed in controlling timber rots there, and extensive experiments were inaugurated to determine the best methods of preserving construction material and the prevention of diseases in standing timber.

PLANT-BREEDING WORK.

The breeding of plants for the purpose of obtaining forms resistant to disease and better adapted to the new and changed conditions which are constantly arising is rapidly becoming an essential feature in agriculture. Attention has already been called to the work of securing strains of cotton resistant to wilt and other diseases. The remarkable success of these experiments indicates the importance of this phase of plant-breeding work. Some new strains of upland cotton were also secured by hybridizing the short and long staple cottons. One of these hybrids in particular is said by experts to be superior to any upland cotton now grown. Numerous other valuable hybrids and select strains have been developed, and these are being tested and their characteristics fixed. A hybrid between one of our American upland cottons and an Egyptian variety promises to be greatly superior to either parent.

For several years the Department has been working to secure, by breeding, a race of oranges resistant to frost. It was proposed by this means to restore the orange groves of Florida, which formerly produced several million dollars' worth of oranges yearly, but were nearly all destroyed by cold a few years ago. Twelve of the new evergreen hybrid oranges, secured as a result of crossing the hardy Japanese form with the Florida sweet orange, have proved to be the hardiest evergreen oranges known in the world. Southern nurserymen have pronounced them to be of great value as hedge plants, entirely apart from their fruit-bearing value. There is great promise, however, that we will ultimately secure a fruit that is hardy and of good quality. Some of the hybrid raisin grapes, produced with a view of securing resistance to a disease known as "coulure," or dropping of the fruit, have borne for the first time. These vines have proved hardy so far and have produced fruit of remarkably fine quality. Some of the vines appear to be resistant to a serious and destructive root disease which has appeared in California, and they may resist the worst of all Pacific coast grape diseases—the so-called "California vine disease."

A serious problem which for many years has confronted the farmers of the West is the securing of plants resistant to the alkali soils of that region. Wherever agricultural crops are being grown there has been more or less adaptability of plants to the peculiar conditions existing in many parts of our Western country, and as a result some plants are found to give much better yields on certain soils than others, mainly through their ability to resist the large amount of alkali present. In connection with the breeding work important investigations have been inaugurated looking to the development of resistant plants of many kinds, special attention being given to the forage crops, as these are of great importance. In this connection cooperation has been secured with the Bureau of Soils, whose work during

the past few years in the West has brought about a much better understanding of some of the important questions concerning the agricultural development of that region. Other important lines of work in the matter of plant breeding have to do with cereal improvement, but these will be more fully discussed under "Introduction of seeds and plants."

NITROGEN-GATHERING BACTERIA.

Nitrogen is one of the most costly and probably the most important of all plant foods. So valuable is this material and such is the demand for it that already it has been predicted that it is only a question of a few years until the commercial supply will be exhausted. Recently, however, attention has been turned to the bacteria which develop nitrogen in connection with the roots of clover, beans, and many related crops. A new method of cultivating and obtaining these organisms in large quantities for distribution with leguminous seeds has been discovered, and will be perfected and put into practical use during the coming year. This, it is believed, will make it practicable to grow many leguminous crops where, owing to the lack of proper organisms, they have refused to grow in the past. It will also make practicable the use of a large number of legumes for gathering nitrogen.

BOTANICAL INVESTIGATIONS AND EXPERIMENTS.

The botanical investigations and experiments conducted by the Department have led to many valuable discoveries, and from year to year their great practical value is being recognized more and more. The work being done on seeds, improvement of crops and methods of crop production in our tropical possessions, and prevention of the great losses of cattle in the West through the eating of poisonous plants is of special interest. The following are some of the more striking results of the work done under this head during the past year:

NEW FACTS CONCERNING KENTUCKY BLUE-GRASS SEED.

The Department of Agriculture has for a number of years past purchased considerable quantities of Kentucky blue-grass seed for Congressional distribution. Since the practice was inaugurated of making germination tests of all the seeds distributed it has been found that Kentucky blue-grass seed, as offered in the open market, could not be secured ordinarily of a higher germination than 50 to 60 per cent. On the other hand, it was found possible, by special purchase, to secure seed showing a germination of 90 per cent and more. These facts suggested an investigation of the causes of the low germination of ordinary commercial samples. It has been found that in harvesting this seed the tops of the grass are stripped from the growing plants

when green and piled in windrows. In this stage, unless great care is taken in turning and airing the mass, a heating takes place in which the temperature rises sometimes as high as 173° F. The tendency of this heating is to destroy the germination of the seed. This fact is readily applied, even under the methods of handling the grass seed which are now followed in the areas where it is grown. In order, however, to secure the most practical results, the Department is now engaged in experimenting with machinery which will dry the moist seed without permitting it to heat, and at the same time without destroying its germination in any other way. There is good prospect that suitable machinery will be found.

SECURING A STAND OF BERMUDA GRASS FROM SEED.

One of the most valuable pasture grasses for use in the Southern States is Bermuda grass, a species of tropical origin. In our latitude this grass seeds very sparingly, and the method of securing a field of it has been to transplant roots. This method, however, is so expensive as to be almost prohibitory. Experiments have been made with good imported seed by the Department during the past two years on the trial grounds at Washington, and it has been found that when sown at the rate of 3 pounds per acre during a portion of the year in which the ground continued moist, a good stand from 3 to 6 inches high was secured in forty-five days. The procuring of good germinable seed and the adaptation of the above facts to conditions in the South should make it possible to secure at a moderate price an excellent stand of this valuable grass.

SUPERIORITY OF AMERICAN-GROWN CLOVER SEED.

Owing to a controversy in Europe regarding the relative value of American and European clover seed, the Department has undertaken some comparative experiments, the initial series of which was conducted at Washington. Many samples of clover seed of known origin from the different countries of Europe and from different parts of the United States and Canada were grown under like conditions. Cuttings of hay were made at suitable intervals, the product of each plat being carefully weighed. These experiments, which have now been under way for two years, show conclusively that under the conditions existing here the European red clover is decidedly inferior in productiveness to the American. Apparently the American strain is better adapted to the conditions of bright sunshine, periodic heat, and dryness that exist here. For the purposes of our farmers, therefore, a decision of the question whether to use American or imported seed is easily reached. During the past year a series of supplementary experiments has been started at typical selected areas in different parts of the United States, to see whether these results hold in the principal clover-growing States.

A REMEDY FOR STOCK POISONING.

The loss of stock in Montana, caused by poisonous plants, has been estimated at from fifty to one hundred thousand dollars per annum. Prior to the present fiscal year there was no simple and reliable way of saving stock when poisoned, but now, by a series of careful experiments conducted at the request of the Montana authorities, the Department has shown that if a small tablet consisting of permanganate of potash and sulphate of aluminum be promptly administered the greater part of this loss can be averted. The action of the permanganate is to oxidize and destroy the poison still remaining unabsorbed in the stomach, and this action is intensified by the sulphate of aluminum. The poisonous plants that respond to this treatment are, so far as ascertained, larkspur and poison camas, the two plants that cause most of the losses in Montana.

STUDIES OF AMERICAN FIBER PLANTS.

The Department's work with Egyptian cotton, outlined in my previous report, has produced very encouraging results, and it is now believed that it can be successfully grown in this country. As early as 1892 the Department imported and distributed seed of some of the choice Egyptian sorts, but owing to lack of money the matter was not followed up. Recently, however, considerable seed has been imported, and the outlook for the growth of this cotton is much more encouraging. Additional facts in regard to what has been accomplished in this line will be given under "Introduction of seeds and plants from foreign countries." Some very encouraging results have also been obtained through our studies of hemp, especially in regard to imported kinds, and particularly those from Japan.

TROPICAL AGRICULTURE.

The acquisition of tropical territory by the United States has made it important and necessary that the Department become thoroughly familiar with the agricultural conditions prevailing in these lands, and their possibilities in crop production, (1) for the purpose of supporting the present population; (2) for supporting the population which will result from the new and changed conditions, and (3) for bringing in revenue from outside sources. The United States pays out millions of dollars annually for tropical products which we ought to grow, and which we can grow without interfering in any way with well-established industries. Coffee, rubber, bananas, cacao, and many other tropical crops not hitherto grown by us can now be produced, and attention has been turned to the best methods of succeeding with such crops.

It is evident that for many years the Department will have to keep in close touch with whatever work may be inaugurated in these outly-

ing lands; hence, experiment stations established there must be so organized as to be an integral part of the Department. In order to do this the stations should be put in charge of men from the Department who are familiar with existing conditions and whose knowledge will render them strong supporters of the Department's work. This policy has already been carried out in the case of the stations established in Hawaii and Porto Rico. The tropical work proper of the Department, therefore, will be along the lines already laid down, and wherever practicable will be carried on in cooperation with the stations established, whose energies, for a number of years at least, must be devoted to matters more or less local.

The improvements in the coffee industry of Porto Rico are an example of what has already been accomplished in this direction. Among the agricultural imports of the United States, coffee is second only to sugar, our annual importations averaging $70,000,000, and only a small fraction of 1 per cent of this quantity comes from our tropical islands. The most important industry of Porto Rico, however, is the raising of coffee for European markets; hence, it has received early attention in our investigations of tropical agriculture. It has been found that the Porto Rican coffee plantations are seriously injured by being too heavily shaded, and also that shade is not, as commonly believed, a necessity, the supposed good effects resulting from it consisting simply in the fixation of nitrogen in the soil by the root tubercles of the leguminous trees used for shade. The other advantages of shade are only indirect, consisting in the protection of the soil from heat, drought, and erosion. Rational moderation in the use of shade, the raising of seedlings in nurseries, and other practical cultural improvements would double or treble the island's output of coffee, and with the increase of acreage readily possible for this crop the island could be made to produce more than half of the coffee consumed in the United States. The work now under way is planned to bring this about, and encouraging results have already been obtained.

GRASS AND FORAGE PLANT INVESTIGATIONS.

The problems involved in the investigations of grass and forage crops are some of the most important that to-day confront the American farmer. As population increases and competition in all lines of agricultural work becomes keener, the need becomes strongly felt for more light on such important questions as: How to restore the great ranges of the West; how to maintain our pastures; how to meet the trying conditions in the South and semiarid West in supplying food for stock, etc. The work of the Agrostologist is conducted with a view to solving these problems, and already very encouraging and promising results have been obtained, some of which may be referred to here.

RANGE IMPROVEMENT.

The loss to the cattle interests of the West during the past fifteen or twenty years, as a result of injudicious management of ranges, has been heavy. In order to obtain some information as to the possibility of restoring these overstocked lands, experiments in regrassing were undertaken at Tucson, Ariz., in cooperation with the agricultural experiment station, and at Abilene, Tex., with Mr. H. L. Bentley, employed by the Department for this work and living at that place. At Tucson a small area of land was secured for the experiments, the ground having been previously denuded of grass through overstocking and mismanagement. Very promising results have already been obtained in connection with this work, it having been shown that by comparatively simple and inexpensive methods much can be done toward bringing the ranges back to their original condition. The experiments at Abilene, a report on which has been prepared, have demonstrated conclusively the possibility of greatly improving the cattle ranges by practical methods and at comparatively little cost, the stock-carrying capacity of the range lands selected for the experiments being doubled in three years. Mr. Bentley claims that it is not only possible to restore the worn-out and grass-denuded ranges to their former productiveness, but that while this is being done cattle may be pastured on them and the number increased from year to year as the capacity of the pastures to sustain them is increased.

Widespread interest in this work has been aroused, and so great has been the demand for its extension that an estimate for additional appropriations to carry on the investigations has been made. I earnestly recommend that the increase asked for be granted, and, furthermore, that action be taken by Congress giving you, Mr. President, authority to secure for the experimental needs of this Department such tracts of public range lands as may be necessary for the best interests of the work.

GRASS GARDENS.

Nothing is more instructive to visitors than to see grasses and forage plants growing, and for this reason considerable time has been devoted to developing the gardens at Washington, and at Buffalo in connection with the Pan-American Exposition. In these gardens the cultivation of ornamental grasses and of grasses suitable to lawns was specially undertaken for the information and guidance of those interested in beautifying the home. More than 300 varieties of grasses and forage plants have been brought together in the gardens at Washington, and many interesting and valuable results have been obtained through a study of their behavior under the conditions of climate and soil prevailing here. A feature of the Pan-American Exposition was the Department's exhibit of growing grasses and forage plants. This exhibit was located near the Government building and attracted wide-

spread interest and attention from the first. As the season advanced and the characteristics of the different grasses became manifest, dairymen and farmers from all sections of the country visited the plots and were much interested in the object lessons they taught.

A unique feature of this exhibit was a display of the sand-binding grasses, the object of this being to illustrate how vast tracts of land along our seacoast may be made profitable at comparatively small expense. A miniature sand dune was produced artificially, and on it were planted the common beach grass of the Atlantic coast north of Virginia, sand millet of the coast of Virginia southward, the sea lyme grass from the coast of Oregon, long-leafed sand grass from the lake shores, and other sand-binding types. Naturally these grasses are never found except in drifting sands, for the fixing of which they are well adapted. Altogether this work has done much to show in an instructive way many interesting features of the grass and forage plant investigations.

COOPERATIVE WORK WITH EXPERIMENT STATIONS.

Another important feature of the work of the Agrostologist during the year was the formulation of a plan for conducting experiments with grasses and forage plants in cooperation with the experiment stations. Formal articles of agreement, setting forth the objects of the experiments, the respective features of the work to be assumed by each party to the agreement, and the manner in which the results obtained may be used by each, were drawn up and the agreement signed by the proper officials of the Department and the stations. In some cases the Department assumed a part of the expenses connected with the experiments, while in others it simply furnished the necessary seed and expert services in preparing the plans.

In arranging for the work care was exercised in each case to select a station in the locality where the solution of the particular problem to be taken up seemed most important, and where the best facilities were provided. The plans have met with general approval, and already cooperative experiments are being conducted with 13 stations. The problems taken up have widespread application, and the results so far obtained lead to the belief that great good is to come from the work as a whole.

POMOLOGICAL INVESTIGATIONS.

The fruit interests of this country have grown to enormous proportions, and the pomological work of the Department is designed to promote them in every way possible. With this end in view, a large exhibit was last year maintained at the Paris Exposition, the object being chiefly to encourage a demand for American products. The beneficial effects of this work are already showing in the increased demand for American fruits, especially oranges and apples. In 1899 the

United States exported 380,222 barrels of apples, valued at $1,210,459. In 1900 526,636 barrels were exported, valued at $1,446,555. Already in 1901 855,673 barrels have been exported, valued at $2,058,964. The value of the oranges exported in 1901 is double that of 1900, all of which can largely be traced to the interest aroused by the work at Paris.

EXTENSION OF FRUIT MARKETS.

In order to open up additional markets for our fruit and to bring about better methods of harvesting, packing, storing, and shipping the same, a small fund was secured for the present fiscal year, and the results accomplished with this encourage the belief that there are great possibilities for trade in American fruit abroad. Trial shipments of pears, peaches, and other fruits have been inaugurated with such encouraging results that it is believed the work will be undertaken next year on a commercial scale by private interests. With the unrivaled facilities America possesses for growing the finest fruits, and with a clear understanding as to the proper methods of handling, there is no reason why a fine foreign trade should not be developed.

ENCOURAGING THE PRUNE INDUSTRY OF THE PACIFIC COAST.

The prune industry of the Western States has grown to large proportions, but in order to compete with foreign trade the need has long been felt for a better knowledge of methods of growing and handling the crop and the best varieties to plant. By an arrangement between the Pomologist and the Botanist an agent was sent during the year to France to study the prune industry there. The work of this agent resulted in the discovery and introduction of several important varieties that promise to be of value in the Pacific Northwest.

GROWING EUROPEAN GRAPES IN THE SOUTH.

The United States imports every year large quantities of European grapes, which are sold mostly for table use. It was believed that some of these varieties could be grown in the South, and to test the matter a number of plantings were made there three years ago. These grapes fruited one year ago, and the indications are that some of the varieties will be found valuable for our markets.

EXPERIMENTAL GARDENS AND GROUNDS.

Under the new arrangement through which the experimental gardens and grounds became a part of the Bureau of Plant Industry, plans have been made for using them in connection with nearly all lines of work. The greenhouses and conservatories prove valuable for the propagation of many useful plants secured by the agricultural explorers and others. Much has been done during the year toward

increasing the valuable collections already on the grounds and propagating and disseminating to nearly all parts of the country rare forms which have proved valuable. A part of the force of the gardens has been employed in gathering seeds of rare trees and other plants, and from them growing seedlings for distribution. The cultivation of plants under glass is rapidly assuming important proportions, many millions of dollars being annually invested in this work. There has long been felt the need of careful experiments to determine methods of growing such crops and improving them. To this phase of work special attention has been devoted, and already promising results have been obtained.

THE ARLINGTON FARM.

This farm, which was placed at the disposal of the Department two years ago, consists of about 400 acres of rolling land, and, as a whole, is very well suited for the purposes set forth in the act. The appropriation available has been devoted to getting the ground into shape, and already marked improvements can be noted. A large part of the preliminary rough work, such as clearing, draining, etc., has been accomplished, and the general plan of getting the land into condition for planting, preparatory to inaugurating experiments, has been perfected. The farm can be made a valuable adjunct of the Department, and will be so managed as to give opportunity for conducting practical experiments in many lines of work. The shaping of a general plan with this object in view is necessarily slow, as each step must be carefully considered. Buildings will soon be needed, and recommendations have been made to this end.

PRODUCTION OF TEA IN THE UNITED STATES.

The production of several kinds of tea in the United States is now an assured fact, and in addition to this it is encouraging to be able to announce that experts who have examined the tea produced here this year pronounce it equal in flavor and aroma to the best imported teas. As pointed out in my previous report, the profit in this crop averages from $30 to $40 per acre net. During the year Dr. Charles U. Shepard, of Summerville, S. C., has been in charge of the Government work, conducting it in connection with his large tea gardens at the place mentioned. This year Dr. Shepard produced about 4,500 pounds of high-grade tea, for all of which a ready market was found in the North. During the year Dr. Shepard perfected a machine for the manufacture of green tea, and has very generously placed this under the control of the Department, so that those wishing to use it may do so without paying royalty.

Capital is always timid of investments in new enterprises of this kind, and there is still much to be done to demonstrate the possibilities

of the work in other parts of the South. The labor problem is an important one, but Dr. Shepard has shown his ability to handle it, and with his aid the Department is now training a few young men in the technique of the work. The extension of the industry in the South and studies for the purpose of improving the quality of tea will be pushed as rapidly as the moneys at hand will permit. There are thousands of acres of land and thousands of idle hands that might be made available for this work, and our possibilities in this field should not be neglected. The United States imports from $10,000,000 to $12,000,000 worth of tea every year, and, although it may be a long time before anything like that amount can be produced in this country, the industry should be encouraged in every possible way.

INTRODUCTION OF SEEDS AND PLANTS FROM FOREIGN COUNTRIES.

The act of Congress establishing the Department of Agriculture specifically provides for the introduction and dissemination of rare and valuable seeds. More or less of this work has been carried on for forty years, but recognizing the needs for enlarged and systematic efforts along this line, steps were taken three years ago which led to a great increase in the Department's opportunities in this direction. Briefly stated, the object of this work is to encourage the building up of home industries and thus save the American people large amounts annually sent abroad. With our vast resources and variety of climate and soil, and a people who are never daunted by the difficulty of an undertaking, the possibilities of developing new fields seem unlimited. In probably no branch of the Department's work can the practical value of its efforts be more quickly shown than in this line. Some of the results achieved the past year are set forth below, and a study of these will show in what manner new industries may be developed.

DEVELOPMENT OF THE RICE INDUSTRY.

In my last report attention was called to the fact that the introduction of Japanese rice resulted in an increased production, amounting to at least $1,000,000, of this commodity in Louisiana, and furthermore, that the impetus given to the work in Louisiana and Texas led to the investment of not less than $20,000,000 in the industry. In 1900 about 8,000,000 pounds more rice were produced than in 1899, and this year 65,000,000 pounds more were produced than in 1900. With the rapid increase in our own production the importation of rice from foreign countries is falling off, as shown by the fact that in three years the imports have decreased from 154,000,000 pounds to 73,000,000 pounds. All the increase in home production can not, of course, be ascribed to the Department's introduction and distribution of Japanese rice, but the great impetus to its production in this country was

given by the Department's introduction three years ago. Evidently it will be but a few years until the United States will not only grow all the rice consumed here, but will export part of the product as well.

MACARONI WHEATS.

The United States imports over 16,000,000 pounds, nearly $800,000 worth, of macaroni annually. This product is made from a special class of wheats, which, until recently, had never been given a thorough trial in this country. The Department secured a quantity of the wheats, and it has been found that they are well adapted to a wide extent of territory in the West and Northwest. During the last two years they yielded one-third to one-half more per acre than any other wheats grown side by side with them, and in 1900, when other wheats were almost a complete failure in the Dakotas, the macaroni varieties produced a very good yield, and the grain was of excellent quality. They have also been very successfully grown in Kansas and Nebraska. The results of last season's work show also that a high quality of grain of this class can be produced.

The Department has made every effort to bring the producers and buyers of this class of wheat together, with the result that the demand for it now more than equals the supply. Moreover, certain companies are now for the first time offering for macaroni wheats, which include the well-known Wild Goose that was heretofore invariably rejected in the markets, about the same price as is paid for No. 2 Northern. There is a demand for carload lots of macaroni wheat for seed as well as for milling. Our own factories for making macaroni are awakening to the importance of using these special wheats instead of the ordinary bread wheats, and the demand for macaroni flour for this purpose is already greatly in excess of the supply. Besides the home demand for these wheats there is a good market abroad.

The building up of the macaroni industry, which has been carried on as a part of the pathological and physiological investigations, shows the importance of concentration of effort on a single crop. With the factories ready to take the wheat and to make from it macaroni equal to the foreign article, it will not be long before the $800,000 sent abroad can be kept at home.

NEW FORAGE CROPS.

For many years there has been an urgent demand for some good grasses and forage plants for the States of the Great Plains, especially for the Northern States, where the winters are so cold and dry that ordinary forage plants are killed out. This demand has been met to a great extent by the importation of the smooth brome grass (*Bromus inermis*), as stated in last year's report. This grass comes from

Russia and Hungary, and has proved to be most excellent for pasture and hay, being perfectly hardy as far north as North Dakota. A hardy alfalfa imported from Turkestan has also proved valuable, being far more resistant to cold and drought than those ordinarily grown and which came originally from much less rigorous climates.

HOPS AND BARLEY.

Although hops have been grown in this country for a great many years, they have always been inferior as compared with the best European hops, and as they bring a lower price in the market and are not so desirable as the Bavarian hops, cuttings of the best of the latter were imported last year. These cuttings have been placed in the hop-growing districts of the United States, and promise to be far superior to the ordinary varieties grown, in addition to maturing earlier and extending the picking season.

American barleys are also inferior to the Bavarian barleys, being too nitrogenous and not sufficiently starchy. The ordinary varieties grown in America are the six-rowed and the four-rowed kinds. The two-rowed kinds of Europe are superior for some uses. The Department therefore imported last year for experimental purposes, in addition to the hops, a quantity of the best Bavarian barleys, and these are now being tried in this country. It is hoped that by growing this improved barley, as well as the superior varieties of hops, the importation of large quantities of some articles of commerce will be done away with.

AMERICAN-GROWN EGYPTIAN COTTON.

Approximately $8,000,000 worth of Egyptian cotton is imported into this country every year, there being a special demand for this cotton on account of its high quality. The Department imported some seed of this cotton several years ago, but more recently larger quantities were obtained and placed where the variety seems likely to succeed. Very encouraging results have been obtained from the work, and this year a bale of Egyptian cotton, grown from imported seed in southern Georgia, was given a thorough spinning test in a mill in Connecticut, and was pronounced equal to the best imported grades. It is believed that we can grow this crop, but aside from this the cottons themselves will be valuable in breeding forms which in all probability will prove better than their parents.

AMERICAN DATES.

Another importation which will probably in time prove of great value to the southwestern part of the country is that of date palms obtained in Africa. A number of years ago a limited importation of these palms was made from Egypt, and, while most of them were lost through adversity of climate, the shipment helped to show the possi-

bilities of date growing in Arizona and southern California. Through agents of the Department a small shipment of date palms was secured from Algeria in 1899, and a large shipment from the same country, mostly from the borders of the Sahara Desert, in 1900, and fully 90 per cent of these are growing vigorously. This year a collection of the choicest varieties in Egypt has been obtained and sent to the Southwest, this importation being in continuation of the plan to obtain from every part of the world where the date palm is grown a complete collection of the choice varieties.

The date palm is of special value in the hot Southwestern country, since it thrives and fruits best where the summers are long and hot, as in Arizona and California. The establishment of the industry in this section, therefore, would make it possible to utilize much of the land there which, though irrigable, is too alkaline for ordinary crops. It is hoped, now that a large number of plants of the choicest varieties have been imported, that in time this country may produce enough dates to supply the home demand and, perhaps, even some for export.

CONGRESSIONAL SEED DISTRIBUTION.

Congress has assigned to this Department the duty of purchasing and distributing seeds and plants, and in order that there may be no question as to how and when this shall be done, the law in regard to it is made very specific. I have endeavored to meet the wishes of Congress in this matter in every way possible, and to the best of my ability have secured seeds of as high character as could be obtained under the conditions under which we work. Notwithstanding all precautions, however, the system of securing seeds through a contractor is apt to cause trouble, not so much on account of the likelihood of having inferior seed furnished, as of the contractor's inability to furnish the varieties called for, owing to the quantity required. This was especially the case the past year, and so many complaints were received in regard to this and other points pertaining to the work that I ordered a thorough investigation by the Chief of the Bureau of Plant Industry, in whose charge the entire matter has been placed. No settlement has as yet been made with the contractor for last year's seed, and none will be made until every requirement of the contract has been fulfilled. No matter what the issue, the Department is fully protected on every point.

Although the amount to be expended for seed for the forthcoming distribution is double what it was last year, the work has been so systematized that no apprehension is felt as to our ability to send out all seeds on time. As soon as it was known how much would be available for the work, immediate steps were taken to get all the preliminaries arranged, and as a result the schedule, which provides that the distribution shall begin December 1 and end March 1, will be carried out to the letter.

In the distribution of the vegetable seed through a contractor three important essentials are provided for; that is, (1) the seeds must be true to name; (2) they must have a high vitality, and (3) they must be free from mechanical impurities. The scientific staff of the Bureau of Plant Industry is charged with the important duty of seeing that these conditions are complied with, and for every failure the contractor must abide the consequences.

In order to increase the value of the work, several changes have been made, which may be briefly referred to here. It has been arranged to send out the cotton seed, tobacco seed, sorghum seed, and sugar-beet seed, and the grasses and forage plants under the direct auspices of the officers of the Department and not through a contractor. By following this plan we have been able to adopt a number of innovations which it is believed will add greatly to the value of the work. The cotton seed, for example, will be selected from high-yielding and comparatively new sorts. The Department has been working for several years improving cottons by breeding and selection, and gradually the seed of these new forms will be worked into the distribution. Furthermore, the adaptation of certain varieties to peculiar conditions of soil and climate will be considered, and this, together with the gradual extension of better grades, will, it is believed, do much to improve the cotton industry in the South. Tobacco seed will be handled in very much the same way as the cotton seed, selected seed being used and varieties sent into districts where the conditions of soil and climate are favorable for their highest development.

With the grasses and forage plants the object will be to demonstrate what varieties are of special promise for different regions, and to this end the country will be properly districted and such seed sent into each district as the experience gained through the work of the scientific branches of the Department may suggest.

It has long been my belief that much good might be accomplished by using a part of the appropriation in a judicious dissemination of some of the more valuable trees. Plans have therefore been made to place at the disposal of each Senator, Member, and Delegate in Congress a limited number of selected trees, the object being to encourage a love for tree planting and all that this work involves. It will, of course, be entirely beyond the scope of the Department to send a large number of trees to any one place, but it is believed that the action contemplated will eventually lead to extensive planting through the educational effects of the work. Commercial establishments are well prepared to supply trees in nearly all parts of the country at reasonable cost, and the plan of our work will, it is believed, eventually advance their interests. Already there has been secured for distribution a choice collection of nut trees, principally pecans, and these are

being grown by the Department from nuts gathered from selected trees in all parts of the country.

It is believed that some such plan as outlined for the distribution of the special crops mentioned above can be applied also to the general distribution of vegetable and flower seeds. It will certainly be an advantage to intelligently district the country and send into each district only such seeds as are likely to improve its conditions. This will obviate the necessity of having to secure such immense quantities of single varieties, a task which is often difficult to perform. It will furthermore enable the Department to gradually introduce into the distribution rarer sorts, and to drop these after the first year or two, leaving the demand for them to be supplied by the trade. When the Department has secured the seeds and plants which it is believed are best adapted to certain districts, its responsibility, to a certain extent, ends, as it looks to Senators and Members of Congress to place them in the hands of such of their constituents as in their judgment will make the best use of them. Due notice, however, will always be given of every special distribution, and in addition all information that the Department possesses will be furnished, so that the recipients may act intelligently in handling whatever may be sent out. Carrying out the work as here outlined it is believed will result in good to the entire country, as is the intent of the existing law.

BUREAU OF SOILS.

The Division of Soils was organized in the Weather Bureau in 1894 by Executive order. In 1895 it became an independent division in the Department, with an appropriation of $15,000. In 1899 the functions were enlarged to include the mapping of tobacco soils and other necessary tobacco investigations, with a total appropriation of $26,300. In 1900 the appropriation was increased to $31,300. In the act approved March 2, 1901, the Division was reorganized into a bureau, with an appropriation of $109,140, and in joint resolution No. 8 of the same Congress provision was made for the printing annually of 17,000 copies of the Field Operations of the (then) Division, at an estimated cost of $20,000; 3,000 to be distributed by the Senate, 6,000 by the House, and 8,000 by the Department.

This remarkably rapid evolution of the soil work of the Department from a subordinate division of the Weather Bureau to a bureau organization of its own, within a period of six years from its inception, is based wholly upon the economic importance and value of the work, the careful and conscientious administration of its affairs, and a thorough understanding and appreciation of its aims by the people upon which the liberal support accorded by Congress has been granted.

The Bureau of Soils is charged with the study of soil problems in

their relation to practical agriculture; with the investigation of the physical and chemical properties of soils and of the materials and methods involved in artificial fertilization and its influence upon the original soils; with the classification and mapping of soils in agricultural districts to show the distribution of the various soil types, with a view to determining their adaptability to certain crops, and their management and treatment; with the investigation of alkali problems and their relations to irrigation and seepage waters, the causes of the rise and accumulation of alkali, and the reclamation of injured or abandoned lands; with the investigation of tobacco soils and the methods of cultivation and of curing, with especial reference to fermentation; the introduction, through selection and breeding, of improved varieties into the principal tobacco districts of the United States, and to secure as far as may be possible a change in the methods of supplying tobacco to foreign countries.

The reorganization of this Division into a Bureau of Soils, with a large increase of funds and a corresponding enlargement of the opportunities for work, went into effect on July 1, 1901; but $10,000 had been made immediately available, and the gradual adoption of the plans of reorganization occupied fully six months of the fiscal year for which this report is intended. The reorganization was based upon the following facts:

In my last report I called attention to the great demand for the soil survey and mapping of soil areas throughout the country and the consequent need of a much larger appropriation. At that time the Division of Soils had made detailed maps of 3,386 square miles, or 2,160,000 acres, a part of which had been published, on a scale of 1 inch to the mile. This work had covered portions of Maryland, Connecticut, Pennsylvania, Louisiana, Utah, California, and Arizona. The Maryland work showed a variety of soils in southern Maryland and the Eastern Shore adapted to a number of special lines of agriculture, including truck farming, fruit growing, special types of tobacco, and general farming, and gave a basis for the specializing of crops and agricultural interests and improved methods of treating the soil, which give promise, if carried out, of important developments in that section. The work in Connecticut had pointed out the possibilities of growing the Sumatra tobacco and of building up a very profitable industry in the raising of this fine type of wrapper leaf. The possibility of this has since been shown in the production of a small crop of very desirable wrapper leaf last year and the growing during the present season of about 43 acres of Sumatra tobacco which promises very well, and which indicates to the tobacco men that the $6,000,000 worth of tobacco which we annually import can be as well produced in Florida and in the Connecticut Valley, with large profits to our own growers.

Equally significant results are looked for in the introduction of Havana tobacco into the tobacco districts of Pennsylvania, Ohio, and Texas, and there was a great demand from these States to map the soils and investigate the possibilities of introducing new varieties of tobacco which would bring a higher market price and would tend to diminish the imports of the finer qualities of filler tobacco.

There was a strong demand from the fruit growers for the preparation of maps showing the distribution of the important fruit lands, particularly of the mountain areas in the Atlantic Coast States. The success of the mountain peaches in western Maryland and of the pippin and other varieties of apples in the mountains of Virginia and North Carolina, and the experience that these were successful only on certain types of soil, made it appear that a detailed soil map would be advantageous and would tend to prevent costly experiments on soils which years of experience might show unsuited to the crop.

The important commercial development of the sugar-beet industry and the large investments necessary in the establishment of sugar factories have created considerable interest and wide demand for soil-survey work in order to locate the best sugar-beet soils where climatic and other conditions were supposed to be favorable for the building up of this industry. The director of the Arizona Experiment Station reported that the sugar content in pounds per acre from five characteristic soils of that Territory ranged from 1,491 to 3,361 pounds, the intermediate yields being 1,521, 2,006, and 2,267 pounds, and declared that it was exceedingly desirable to have the soil outlined that gave the largest yields of sugar. Urgent requests on similar lines came from important sugar-beet areas of the southern and central coast regions of California and from those of New York and Michigan, as well as other States. With the training and experience of our field men the soils of these areas can be definitely outlined and their relation to the production and purity of sugar beets determined in advance of any costly investments which might prove unprofitable.

The work of the soil survey in the Western irrigated district and the investigation of the alkali problem, which has been a serious menace in certain localities, and the results of this survey, which show that the problem can be easily and economically controlled by underdrainage and improved cultural methods, have aroused a great deal of interest, and many urgent requests have been made that the work be extended to other areas.

The tobacco investigations are bringing most important results by the introduction of new varieties and better methods of handling the crop, thereby creating new and more important types for this country and improving those already grown. It was found imperatively necessary, in order to obtain the best results, to secure the very best

available experts in this country, and in order to do this much larger salaries had to be given than had formerly been allowed in the divisional organization. The wisdom of this step has been amply demonstrated in the results attained and in the efforts of foreign countries to induce our experts to leave and transfer their valuable work to other localities.

The Agricultural Committees of both Houses of Congress looked into these matters very carefully, and, after a thorough consideration of the questions involved, decided that the reorganization of the Division into a bureau was necessary to enable the Department to handle these lines of work in a manner commensurate with their commercial importance. Accordingly this change was made by Congress, and the appropriation was very largely increased and the organization was made much more efficient than it had been on the old divisional plan. Congress also provided for the immediate use of $10,000 of the funds to allow of the plans being definitely formulated and men trained, so that on the 1st of July, 1901, the Bureau could start as a well-organized office for the efficient working out of the duties pertaining to it. This made it possible to secure the practical reorganization of the Bureau several months in advance of the actual operation of the law, and the wisdom of this has been amply demonstrated in the operations outlined in this report.

This action of Congress has opened up a new and very important era for the investigation of soils, which should be of fundamental value in the development of the agricultural interests of the country.

The following summary of the operations of the Division during the past year will show the economic aspect of the work and will be of interest to all those engaged in practical agriculture, especially those interested in intensive cultivation, and the introduction and management of new crops and industries, and in the remarkable advance recently made in agricultural industries of the country, which is the foundation of much of its commercial prosperity.

PROGRESS AND COST OF THE SOIL SURVEY.

The area surveyed and mapped during the fiscal year was 5,596 square miles, or 3,581,440 acres. The area previously reported as having been surveyed was 3,486 square miles, making a total of 9,082 square miles, or 5,812,480 acres. Field work was carried on during the year in California, Maryland, Michigan, New York, North Carolina, Ohio, Pennsylvania, Utah, Virginia, and Washington; and the preparations were all made for field work to be started in Idaho, New Jersey, Tennessee, and Texas immediately upon the agricultural bill going into effect on the 1st of July, and also for field work in Louisiana, Mississippi, Georgia, and Florida, to be started on the 1st of October, when parties working in the Northern States will be sent South.

The following table gives the area of soils surveyed and mapped in the several States in which the work has been carried on to the end of the fiscal year:

Area surveyed and mapped during fiscal year ending June 30, 1901, and the area previously reported.

State or Territory.	1901.	Previously reported.	Total.	
			Square miles.	Acres.
	Sq. miles.	*Sq. miles.*		
Arizona	.....	400	400	256,000
California	951	450	1,401	896,640
Connecticut	.....	245	245	156,800
Idaho	(a)	.....	.....	.....
Louisiana	.....	1,000	1,000	640,000
Maryland	1,137	625	1,762	1,127,680
Massachusetts	.....	155	155	99,200
Michigan	a 35	.....	.....	.....
New Jersey	(a)	.....	.....	.....
New Mexico	.....	100	100	64,000
New York	a 20	.....	.....	.....
North Carolina	1,700	100	1,800	1,152,000
Ohio	480	.....	480	307,200
Pennsylvania	320	100	420	268,800
Tennessee	(a)	.....	.....	.....
Texas	(a)	.....	.....	.....
Utah	457	311	768	491,520
Virginia	250	.....	250	160,000
Washington	301	.....	301	192,640
Total	5,596	3,486	9,082	5,812,480

a Field work in Michigan and New York was started on June 15, but the area surveyed in this fiscal year was too small to report upon the cost of the work and they have not been included in the total. The preparation for the other States marked were all made in the fiscal year ending June 30, 1901, but the field work was actually started from the 1st to the 3d of July.

The total cost of the work in the field amounted to $11,309, of which $1,500 was paid by various State organizations. Including the cost of the work in the field, the preparation of reports, and transportation and supplies, the field work has cost the Department on the average $3.26 per square mile, or about 51 cents per 100 acres. This is exclusive of the cost of publications. That the results have been of value to the communities and to the country at large has been attested in many gratifying ways. Requests for the extension of the work have come from prominent and thoughtful men in nearly all the States and Territories and from those interested in many of the large agricultural interests, such as sugar beet, tobacco, wheat, truck, rice, fruit; and especially from many areas where peculiar conditions of soil, climate, transportation, or labor make it necessary to introduce new crops or new methods for successful competition in the interests of the country.

Our trained soil experts remain from three to nine months in a district, visiting almost every foot of the area and mapping what they

find, studying the methods and conditions, meeting the people and learning of their successes and failures, and thus they can not help acquiring a fund of information relative to the soils, crops, and methods of the districts visited which should be a basis for the introduction of new crops or improved methods. The field men have at all times the cordial support and all the resources of the laboratories of the Bureau of Soils and of the other scientific divisions and bureaus of the Department.

Demands have been made on the Bureau for the extension of the soil survey to Alaska, Porto Rico, Hawaii, and more recently from the War Department for trained men for similar lines of work in the Philippine Islands. The lack of a sufficient number of trained men has prevented an extension of the work to any of these areas heretofore, but these demands should be met in as short a time as possible.

DETAILS OF THE FIELD WORK.

WESTERN DIVISION.

Results in California.—Field work was carried on during almost the entire fiscal year in California. The soil survey of 640 square miles around Fresno, mentioned in my last report, was completed during the first part of the year.

An area of about 300 square miles was surveyed around Santa Ana, extending from the foothills to the Pacific Ocean, the main part being formed by the vast delta plain of the Santa Ana River. In that portion of the region above the 70-foot contour there is little or no alkali, and the lands are well adapted to citrus fruits and nut trees. Below this elevation the lowlands are devoted either to alfalfa or natural pasturage and to important special industries of celery and truck growing. The fruit industry is hardly known in this portion of the area.

Nine different types of soil were recognized, each with distinctive agricultural values and best adapted to different kinds of crops. The soils of the high-lying portions of the area are, as a rule, well drained, and, owing to the small amount of water available for irrigation and the care which has to be exercised in the use of it, very little alkali has been found. The cementing of the canals and ditches to conserve the water gives an object lesson of the practical value of care and economy in the use of water on soils of this character in preventing the rise of alkali, which in the low-lying portion is a serious menace, but which can be controlled by underdrainage.

About 200 square miles were surveyed in the San Gabriel Valley. The problems encountered were purely soil problems, as there was no land injured by alkali or seepage waters, except a few small spots at the narrows where the San Gabriel River leaves the valley. The depth to standing water is great and the difficulties of obtaining water enough to keep the crops alive during the past dry years have been

the cause of much expense, but have undoubtedly saved the country from injury by alkali.

The most important problem which was encountered was the question of fertilizing the soils. California has no fertilizer-control law. Numerous brands of fertilizers are manufactured, each with a special object in view, and all are sold at high prices and with no guaranties but the manufacturers' analyses. The farmers are using large quantities of these fertilizers, in many cases unnecessarily, and in most cases without discretion, but in the hopes of supplying the requirements of the plant and of increasing the yield of fruit. There is great necessity for information on these points, and this information can only be gained through extensive plat experiments. The soil maps will show the best places to carry on this experimental work. Investigations in this line by some one competent to undertake such studies should be started at once, and the excessive application of fertilizers should be stopped, unless the necessity of such large applications is proved by experiment.

About 216 square miles were surveyed around Hanford. The most important problems encountered in this section are those of seepage water and alkali. All of the land is low, most of it being in the slough country, and when well drained and free from alkali is very productive. The drainage is into Tulare Lake and into the San Joaquin River by way of the sloughs which connect the Kings and San Joaquin rivers. During the winter and spring months the sloughs and streams fill with water and soak the subsoil, so that standing water is found at less than 6 feet from the surface of the ground. Everything possible is done to assist this filling of the soil with water, for the success of the following crop is supposed to depend upon the water which is thus stored in the soils. The natural drainage by the sloughs is often artificially blocked by dams during this period, and the irrigation canals continually carry water on the land. There is no question that the crops are benefited by the water stored in this way at certain seasons, but at the same time some of the most valuable land is being ruined by the rise of alkali due to the high water table. Already large areas are left out of cultivation, and unless the present practices are changed further damage will ensue. Instead of damming the drainage systems, everything possible should be done to carry off the winter's excess of water, and, instead of depending upon subirrigation to furnish the needed water supply, the water should be applied from the top of the ground, which would tend to drive the alkali down.

In order thoroughly to reclaim the district and insure against further damage, a drainage district should be formed and outlet canals be dug for the free passage of the excess of water, and the sloughs which are now dammed should be opened. If winter irrigation is to be practiced, it should be from the surface, for subirrigation in such soils,

particularly if the level of the standing water comes to within 4 or 5 feet of the surface, involves serious danger of the rise of alkali. There are large areas of land already alkaline which could be reclaimed at a profit, and it is hoped that these investigations will make this point so clear that the people of the district can be prevailed upon to make the experiment of reclaiming small areas for demonstration.

Results in Utah.—About 310 square miles were surveyed around Ogden. This area is divided into two agricultural districts, a broad delta plain, upon which Ogden is situated, and in which the principal irrigation is carried on, and an upland portion composed of foothills and mountainous land. In addition to these, there is an area of nearly 100 square miles of recent delta, formed by the recession of the Great Salt Lake since the early surveys were made in 1858. This land is now so full of alkali that no cultivated crops are grown upon it. Eight types of soil were recognized and mapped, each having more or less distinct differences and adapted to different agricultural interests.

The irrigation water of the district is exceptionally good and free from alkali. There is more than enough water to irrigate all the lands within the area, provided it were distributed at proper seasons of the year. Unfortunately, however, the larger part of it comes in the early spring, and there is frequently a shortage during the growing season. Plans are being considered for a large storage reservoir to equalize the distribution and to insure against seasons of drought and low water. Many of the canals run over deep, sandy soils, with no protection against seepage, and it is estimated that fully half of the water is lost in this way. This is not only an unnecessary waste of water, but is the cause of a large amount of injury by the subirrigation of large areas in which the ground water is so near the surface as to be harmful to crops. The whole area surveyed contains about 198,400 acres, of which 137,000 acres could be irrigated. There are actually about 40,000 acres under irrigation. In about 83,000 acres there is so little alkali that their use for cultivated crops would be absolutely safe. About 16,000 acres have sufficient alkali to make their cultivation at least dangerous, while there are 99,000 acres containing too much alkali for crops. Good lands in this vicinity are worth $100 an acre, and when set with valuable fruit trees much more than this, so that the importance of this alkali problem here is apparent.

Results in Washington.—A soil survey was made of about 198,000 acres in the Yakima Valley. Frequent mention has been made by agricultural investigators of the alkali in the soils of this valley. The amount of alkali found by our parties was very small when compared with the area which has been irrigated, but the land which is damaged is near Yakima and is the most valuable land in the valley owing to its proximity to town and the ease with which it can be irrigated. Under the Sunnyside Canal, below North Yakima, practically no land has

been damaged yet, but there is alkali in the subsoil which may rise to the surface in low places. Excessive amounts of water for irrigation are constantly being used, and the subsoil is rapidly filling with seepage water. If this rise of subsoil water goes on much longer lands will suffer. Only a small percentage of the available land is irrigated at present, and it is hoped that the dangers of overirrigation may be shown so clearly that land which is now threatened may be saved.

EASTERN DIVISION.

Results in Pennsylvania.—During the fiscal year the survey of Lancaster area, 270 square miles, started during the latter part of the previous year, was completed. Lancaster County was selected for the work, as it is an important tobacco-producing section, that it might serve as a basis for the experiments on the improvement of the Pennsylvania tobacco and the introduction of the Cuban type of filler leaf. The area surveyed consists of a broad limestone valley, with sandstone and shale ridges of sedimentary rock, and, in the southern part, of the Piedmont plateau of crystalline rocks. The difference in the commercial value of the eight types of soil established is very great. The best limestone lands are worth from $125 to $250 an acre, while some of the other soils have merely a nominal value. The investigations, while started in the interests of the tobacco culture, indicate that new industries may be established on soils that at the present time are held in slight esteem. Important lessons are taught from the industry of the people which would be of immense practical value if applied in other localities. Active steps have already been taken to follow up this survey with an attempt to introduce a better type of tobacco on certain soils which closely resemble some of the Cuban soils.

During the spring of 1901 this work was extended into Dauphin and Lebanon counties.

Results in Ohio.—A soil survey was made of Montgomery County, comprising an area of 480 square miles. This county is the center of the Zimmer Spanish cigar-filler tobacco district, and it is intended to follow up the survey with tobacco investigations similar to those planned for Pennsylvania. The eight types of soil found in the county are derived from glacial material, which has been reworked to some extent by stream action.

Results in North Carolina.—The North Carolina department of agriculture asked the cooperation of this Department two years ago in the classification and mapping of the soils of that State, as a basis for experimentation upon the crops and methods of cultivation and fertilization best adapted to the several soils. In pursuance of this cooperation, a soil survey was made from Raleigh to Newbern, a distance of 100 miles, with an average width of about 9 miles, crossing the entire section of the coastal plains and reaching up into the soils of the

crystalline rock areas of the Piedmont Plateau. The area selected was close to the Neuse River, which has considerably altered the materials within a few miles of its channel, making such changes, in fact, that 16 distinct soil types were recognized and their agricultural values determined. It seems almost incredible that in a district so comparatively small as this, and on what has always been considered rather a uniform portion of the coastal plain, there should be so great a variation in the soil types, and that these different soils should have such markedly different values for crops.

The fact remains, however, that the differences are very great, and it was pointed out in the report that certain of the types are adapted to certain interests peculiar to that region or to similar regions of the coastal plains which have been studied elsewhere. The soils adapted to truck crops, bright tobacco, cotton, wheat, corn, and grass, and those which are not adapted to any of our present crops, are indicated on the maps and are described in the report.

In the spring of 1901 an area of 800 square miles was surveyed around Statesville, N. C., and a camp was established there for the training of some of our field men. The soils in this area are derived from granites, gneisses, and other crystalline rocks, and are similar to the soils of the Piedmont region in Virginia and Maryland. The principal crops are cotton, corn, and wheat. It was apparent during the survey that the agricultural possibilities of the two principal soil types have never been realized. There is a wide opportunity for the introduction of improved methods and of new crops and agricultural interests, and the North Carolina department of agriculture has announced that these possibilities will be fully investigated.

Results in Virginia.—The demands for the soil work in Virginia were so great and from such a number of widely different localities in the State that it was difficult to determine where the survey should be started. It was finally decided to take up an area in Bedford County, including a portion of Piedmont Virginia and of the Blue Ridge Mountains, and then to enter Prince Edward County, which is typically a dark-tobacco district. About 600 square miles will be surveyed in Bedford County. On the Piedmont portion of the area the soils are derived from disintegration of crystalline rocks, and the prevailing types are well adapted to grass and corn particularly. Considerable attention is already paid to the raising of cattle, and the heavy shipping and manufacturing tobaccos are produced to some extent. The most important results of the survey, however, are looked for in the classification of the mountain lands in the development of the apple industry. This section is already recognized as a prominent apple-growing district, but there is room for the extension of both the apple and peach industries. Soil types are being recognized and mapped which are adapted to these fruits and to their different

varieties, and it is believed that the work will be of great value to horticulturists.

Results in Maryland.—The cooperation with the Maryland geological survey and Experiment Station, looking to the development of the agricultural industries of the State, has been continued. Soil surveys of St. Mary, Calvert, Kent, and Prince George counties were completed during the fiscal year. In St. Mary and Calvert counties there are eight types of soil, which differ greatly in character and agricultural value. They are suited to different crops and agricultural conditions; but this fact has never been fully realized, and it is only by realization of this and the proper adaptation of the soils to the crops that the greatest development of the country can be brought about. There are soils there ranging in value from $3 to $10 an acre which are in every way equal to the soils in other localities worth ten times as much, and which are profitably worked at this valuation. In Prince George County a greater number of soil types was encountered and a greater variety of interests can be subserved. The proximity to the Washington and Baltimore markets should make it possible to introduce intensive methods, which would greatly change the agricultural conditions of the region. It is understood that the Maryland Experiment Station will actively push the further investigation of the possibilities of developments in the crop interests and of new methods adapted to different soils.

DRAINAGE INVESTIGATIONS.

Attention has frequently been called in the reports of the Division of Soils to the possibility and feasibility of reclaiming alkali lands and preventing the deterioration of lands from alkali by efficient underdrainage. This has been dwelt upon by other writers and presented in the strongest possible terms as the most rational and only safe method of solving the alkali problem. Unfortunately, on account of the conservatism of growers, these recommendations have received little or no attention, and there is no general recognition of the possibilities of controlling the problem in this way. Owners who are not at present troubled with alkali do not appreciate the necessity of protecting themselves, and it is a curious fact that just before the alkali becomes so strong as to prevent profitable cultivation the crop yields are the largest. After that the land deteriorates so rapidly that the owner is disheartened and is not inclined to invest money where ordinary means of cultivation have failed to secure profitable returns. It was necessary to make a practical demonstration of the possibilities of growing Sumatra tobacco in Connecticut to get the industry started. The recommendations of the Department in this regard were unheeded until the correctness of its predictions was thus demonstrated.

Attention has heretofore been called to the possibility of reclaiming

the alkali soils of the Yellowstone Valley and to the desirability of reclaiming the great alkali flat in the Salt Lake Valley, covering upward of 60,000 acres of redeemable land. It will be necessary, in order to secure the greatest benefit from the soil investigations, to make an actual demonstration of the practicability and efficiency of underdrainage in the reclamation of these alkali tracts.

In 1864 the Government of India published correspondence relating to the deterioration of lands from the presence of alkali, in which the following statements were made:

> In the districts reported there were 59 villages in which the agricultural industries had been wholly or in large part destroyed by the rise of alkali. By the year 1850 it had made great progress and was becoming alarming. From that time until 1858 it increased yearly with frightful rapidity. The cause was attributed to the rising of the springs throughout the tract to within a very short distance of the surface of the soil. First of all is the development of the alkali; second, condition of dried swamp; third, inundation. Water in these valleys used to be about 40 baths (60 feet) below the surface, and in 1858 it was 2 or 3 feet. No temporary improvement can arrest the natural course of things, and notwithstanding accidental checks the work of deterioration, if left to itself, will gradually complete itself, the completion depending upon the amount of land the amount of water can affect. Attention is called to proper construction of canals and irrigating ditches, so as to prevent loss from seepage, and the necessity of economy in the use of water. With such precautions taken, underdrainage would be a sure means of reclaiming the lands from alkali and seepage waters. There is no economical substance practicable within the means of cultivators of any section capable of remedying the saline matters, but wherever drainage can be accomplished the thorough working of the surface soil, with abundance of water from the canal, will, if continued for a couple of seasons, dissolve and carry away the noxious salts, but the drainage must be efficient and rapid, otherwise the salt will merely dissolve and be again deposited in the same place. Drainage will prevent as well as cure, and even a small decimal percentage will surely and in no very long time accumulate to 3 or 4 per cent or more, according to the circumstances of the ground in relation to evaporation and drainage. Wherever alkali comes from, drainage is the only and efficient cure.

With these plain warnings from the reports of English engineers to the Government of India, it would seem that the people and the Government itself had been sufficiently well informed of the gravity of the situation and of the means for the removal of these causes. Yet in reports published by the Government of India in 1870, and even as late as 1881, it is stated that underdrainage had not been attempted, that the recommendations of the engineer officers ten or twenty years before had not been carried out, and that the alkali question was becoming more and more serious and alarming, while the Government was being called upon to support large numbers of people who had been rendered destitute by the encroachments of this evil.

In view of such marked examples as this of the ultraconservatism of agricultural communities, and the fact that the recommendations made by this Department are little heeded, I am becoming more and more convinced that, in order to carry the lessons of the soil survey home to

the individual, it will be necessary for the Department to undertake a practical demonstration of the efficiency of drainage in the reclamation of alkali lands.

Plans were made for such a demonstration during the latter part of the fiscal year, with the cooperation of the Utah Experiment Station and some of the public-spirited people of that State. It was proposed to underdrain a small tract of 10 or 20 acres and cultivate the land in a proper way for two or three years to note the improvements in condition until agricultural crops could be safely grown. The expense of underdrainage when undertaken on a considerable scale should not exceed $15 or $20 per acre, so that the cost of a demonstration of this kind would not be great. Unfortunately the plans were interfered with and the work has had to be temporarily abandoned. It should, however, be taken up at the earliest practicable time.

A great interest has been taken in this line of investigation in Montana, Utah, Arizona, and California, the places where the soil survey has been carried on. A great deal of interest has been expressed in this enterprise, particularly in the Yellowstone Valley, at Salt Lake City, and at Fresno, and plans are now under consideration for a demonstration of this kind at these places.

The actual field expenses of such an experiment would hardly amount to more than the cost of publication of a bulletin containing recommendations which would receive but little notice. The demonstration itself, however, if definitely carried out, would be of infinitely more value, as it would be an object lesson for the people and could not fail to arouse an interest which would spread throughout the community. While the Department is spending thousands of dollars for the investigation of these problems, the matter of expense of such demonstrations should not be considered, provided, as in this case, it seems necessary to use this means to inaugurate better methods, which will be of immense benefit to the localities.

SOIL CLIMATOLOGY.

The Division of Soils was originally organized in the Weather Bureau, under a clause "to investigate the relation of soils to climate and organic life." When for administrative purposes it was reorganized as an independent division of the Department, this work was still recognized as of paramount importance and is still authorized under the first clause of the annual appropriation bill. It was pointed out that the soil, being the receptacle of the rainfall and maintaining the only immediate water supply for crops, is a factor of climatology, and as different types of soil maintain different quantities of water, it may be assumed for all practical purposes that crops growing on these different types of soil, even with the same rainfall and temperature, are really under different climatic conditions. This is the basis of much

of the specialization of agriculture and a principal cause of the local importance of certain districts for special crops, such as truck, tobacco, and fruit, as well as for the distribution of such farm crops as corn, wheat, and grass. The recognition of this fact is largely the basis of the soil survey and for the highest prosperity of agricultural communities. Furthermore, it is a well-known fact that the degree and character of cultivation has a marked effect upon the moisture supply of the soil, and thus controls in no little degree the climatic conditions under which the crop is grown.

In certain sections of the country and on certain soils, notably in California and the Northwestern States, the condition of the soil for various crops and the probable yield can be fairly estimated from the water supply in the soil some weeks, or even months, before the harvest.

In former reports attention was called to the progress made in the perfection of instruments for recording the moisture contents of soils in the field and for determining the tendency to evaporation or loss of water from plants for which an adequate moisture supply must be maintained. Stations were established in different parts of the country and on important soil types for these moisture records. From these records it was possible to show the normal variations which could occur in any soil between the conditions of excessive wet and drought, and the possibilities were pointed out of determining a numerical relation between the soil moisture and the sunshine, temperature, humidity, and wind velocity which would enable the climatic condition to be expressed by some figure representing the relative condition of plant growth at any place in terms of the most favorable conditions. This is in no way covered by the work of the Weather Bureau, which is concerned largely with dynamic meteorology, or the laws and prediction of storms, and will involve an entirely different equipment and an independent set of observations, taken in the fields and soils of growing crops rather than in cities and towns.

The value of such observations, taken by a corps of experts trained to observe and understand plants as florists understand greenhouse plants, can not be estimated. Reports based upon such observations in a period of drought, such as the Middle West has just experienced, would show the actual conditions existing far more accurately than is now possible. Furthermore, as the drought limit is approached in any soil suggestions can be made for preventive measures in cultivation or cropping which may save many bushels of grain on any farm, which in the aggregate for all the farmers who would heed the warnings sent out from Washington would save an immense sum of money to the agriculturists.

The time has come when this work should be again taken up on a

scale commensurate with the extension of at least two or three crop interests. It is certain that the immediate benefit to the farmers will amply repay the expenditure.

SOIL TECHNOLOGY.

The field parties see many opportunities of improvement in the crops or methods of cultivation in the districts in which they are located which they have not time, in the rapid progress of their work, to demonstrate, and for which they must rely upon recommendations in their rather brief reports. Such recommendations seldom accomplish the object sought, on account of the well-known conservatism of growers. It may be that the evidence indicates the need of drainage or the correcting of acidity in the soil, or may suggest the introduction of new and profitable crops. Such suggestions are rarely acted upon in that thorough manner necessary for a practical demonstration, and it therefore seems advisable, if the full value of the soil survey is to be realized, to organize a division of soil technology to work out the suggestions and demonstrate the efficiency of new methods or the feasibility of introducing new crops, as has been done so successfully in the case of the tobacco work.

It is difficult to find trained men for this work in this country, and the success of such an organization would depend largely upon the personnel of the force. Our agricultural colleges should turn out such men, but they seem not to have done so. There are practical men who could carry on such work under the direction of our scientists, but they are usually so successful as managers of estates that they can not be induced to accept a place for the salaries allowed by Congress in this Department. It is necessary, in this as in other lines, to train the men ourselves, unless higher salaries are paid.

TOBACCO INVESTIGATIONS.

In my last report attention was called to the success of the exhibit of American-grown leaf tobacco at the Paris Exposition and the number of awards given. After the installation of the exhibit and the work of the jury of awards had been completed the tobacco expert of the Division spent some time, under orders from the Secretary, visiting the foreign markets, particularly in Paris, Bremen, Amsterdam, and London, where large quantities of our domestic tobaccos are sold or where we ourselves purchase leaf for our own use. The information gathered in this way of the character of the tobacco from all over the world with which we have to compete in our foreign trade, of the requirements of these markets, and of the methods of selling under the regie system prevailing in certain of the European countries,

promises to be of great value in the investigations which it is planned soon to take up of the export types from Virginia, North Carolina, Kentucky, and Tennessee.

Upon the return to this country of our tobacco expert, Mr. Floyd, active steps were taken to start some investigations on the improvement of the Pennsylvania leaf, with the object of seeing what could be done with it, and the further object of introducing a more desirable filler leaf, if such a step seemed necessary for the building up of the trade in Pennsylvania tobacco. A soil survey had been made of the principal tobacco districts of Lancaster County as a basis for the possible introduction of new varieties. In the preliminary work of manipulating the present type of leaf grown in Lancaster County a different method of fermentation was tried, in which the tobacco is fermented in bulk, according to the practice in Cuba and Florida, which had been successfully used on the Connecticut leaf the year before.

Fermentation by this process is completed within forty or fifty days, under the constant supervision of an attendant, who turns the bulk from time to time, thus making it possible to watch the progress of the fermentation and to modify the conditions if circumstances seem to require it. This is a decided gain in point of time, and is much less expensive in the way of storage and insurance risks than the old method of case fermentation, where the tobacco was set aside for from six to nine months in a tightly packed case, in which it was doubtful whether it would escape injury by black rot.

The first experiment was made on an old crop which had not fermented by the usual case method, but which had developed a considerable amount of black rot. Bulk fermentation proved perfectly successful, the quality of the leaf being greatly improved and no further development of the black rot appearing while the tobacco was in bulk or afterwards. The results of this experiment seemed to be of such marked value that several of the leading packers of Lancaster opened their warehouses to us and installed, at considerable expense, proper facilities for handling the crop. As a result of this, during the winter and spring of 1901 over 4,000,000 pounds of tobacco were fermented in bulk under our direction, with a total loss of only 35 pounds from black rot and all other damage. This is exclusive of one of the first bulks, which was almost entirely destroyed by black rot, as the conditions for handling the crop were not thoroughly understood. It is a difficult matter to give any close estimate of the usual damage from black rot, as the dealers hesitate very often before admitting that there is any at all; but a conservative estimate would show a loss of $500,000 or more per year in the Pennsylvania crop, and in some years it must considerably exceed this figure. The success of this method of fermenting the tobacco, both in improving the quality of the leaf, which is generally conceded, and in controlling the dreaded

black rot, about which there is no longer any doubt, is assured, and it is confidently predicted by the packers themselves that the new method will entirely supersede the old, especially where large crops are to be handled. If this is done it will mean a saving to the State of Pennsylvania alone of an amount far exceeding the present cost of the whole Soils Division.

In the early spring arrangements were made with four prominent growers on different soil types in Lancaster County to introduce some of the finer Cuban seed, and these experiments are now progressing under our control, the latest reports of the work being very promising. It will, of course, be several months before the actual results can be determined, but if they seem to warrant it all necessary attention will be given to the important experiments at this point in the endeavor to raise the quality of the Pennsylvania leaf.

In my last report I announced the complete success of the small experiment of growing a fine type of Sumatra leaf on certain soils in the Connecticut Valley. This experiment had been made on a small tract of one-third of an acre, and it was thought best to extend it to a larger area in order to see if, under the conditions prevailing and with the large cost of production, the tobacco could be profitably raised in the valley. Accordingly, in the spring of 1901 arrangements were made with a number of farmers in Connecticut and Massachusetts, in areas as widely separated as possible, and on typical soils which it was thought could be used for the Sumatra tobacco, and nearly 43 acres were placed under our immediate control. It was agreed that the farmers should furnish all needful material and labor, and that the Department should assume direction of affairs in the practical management of the crop.

The understanding is that all the necessary information regarding the actual cost of the work shall be at the disposal of the Department to publish, and that the Department itself shall have the right to sell the crop for the farmers, so as to insure an absolutely impartial judgment from the leaf dealers as to the quality and value of the product. It will, of course, be some time before the actual results of this large experiment will be available for publication. It has been estimated roughly that about $20,000 has been invested on the part of the farmers, with no expense whatever to the Department except that of supervision.

The experiment has attracted a most remarkable interest, and prominent growers and packers have visited Tariffville, the Department's headquarters for this work, from many places in Connecticut and Massachusetts, as well as from Pennsylvania, New York, Ohio, Wisconsin, and Florida. The present indications are that the crop will yield at least double the cost of production, although nearly three-fourths of the original cost is in what might be termed permanent improvements—that is, in the erection of the shade—which will last from

five to ten years. It is probable that within two or three months from the time of the publication of this report the data will be available for the issuing of a special report on this experiment, giving the methods and cost of production and the value of the crop. It would therefore be unwise at this time to attempt to forecast the results.

In view of the phenomenal success of the introduction of Sumatra leaf into the Connecticut Valley and the control of black rot in the Pennsylvania crop, there have been many urgent demands for help in the tobacco industry in New York, Ohio, Wisconsin, Texas, and Florida. Preliminary steps have been taken to meet these demands, but they are so great that it will take considerable time to extend help even where it is most needed. Active measures are being taken, as announced in my last report, for investigating the possibilities of growing Havana tobacco in Texas, and it is aimed to make this experiment one of the strong features of our work for the coming year.

It must not be overlooked that there is pressing need of investigations in the manufacturing and export types of the Southern States, and there have been many requests for such help on the part of the Department. It has seemed wise, however, to confine our attention to the highly organized industry in the production and handling of the cigar types and to get this work well established before the other types are taken up. Just as soon as possible, however, the Virginia, North Carolina, Tennessee, and Kentucky districts will be attended to. Preliminary work is being done in several of the States in the construction of soil maps of the important tobacco areas, and plans are being perfected for the improvement of the types and grades of leaf grown there.

During the spring of 1901 a comprehensive exhibit of leaf tobacco was installed at the Pan-American Exposition in Buffalo, modeled somewhat after the exhibit at Paris, although necessarily much smaller, as the space at our command was considerably less.

Another important line which has been taken up is the securing of tobacco seed for Congressional distribution. Contracts have been made with leading growers in the various States to have seeds saved from healthy, vigorous, well-bred plants, and arrangements have been perfected for the distribution of these varieties to the districts to which they are particularly adapted. It is believed that this will be a great improvement over the former miscellaneous distribution of tobaccos of all kinds to all districts.

EXPENSES OF THE WORK.

In thus briefly reviewing the work of the Division of Soils and stating the results, the commercial value of which is already apparent in several lines, and which open up great possibilities for improving methods and crops in still others, I can not refrain from showing the

very moderate expense this work has been to the Department and to the country during the past fiscal year, as follows:

		Per cent.
Administrative expenses	$10,081.68	25.3
Laboratories	5,929.45	14.9
Tobacco investigations	5,609.64	14
Eastern soil survey	8,828.88	22.2
Western soil survey	9,392.45	23.6
	39,842.10	100

It is only necessary to compare the extent of the operations of the Division, the results accomplished during the year, and the present well-organized condition of the work with the total outlay involved to show conclusively that the money appropriated has been wisely and economically expended and that the results could only have been secured by an excellent organization and by efficient and earnest cooperation on the part of all employees of the Division.

REVIEW OF SOIL WORK.

This report marks an epoch in the work of the Division of Soils, namely, the transformation of the Division into a bureau well organized and well equipped to carry on the work in a larger and broader field than has ever before been possible. In this connection certain features characterizing the work of the Division during the past year invite special attention.

Every impartial reader of this report will concede to me the right to point to the work of the Division of Soils as work which fully and thoroughly meets the supreme test of the Department's practical utility, namely, the material benefits accruing to the tillers of the soil with a very modest expenditure of public funds.

The popularity of the work of the soil survey, as shown in the numerous requests for its extension which have come from all the States and Territories, has been amply justified by the practical results already attained by our field parties. The prophecy volunteered not so long ago of the impracticability of a comprehensive and effective soil survey has been effectually disproved. To-day there is not only no difficulty in securing active cooperation with State organizations, but cooperation has been offered far in excess of our present available force. The workers in our field parties are every season acquiring new and valuable experience, which promises to make them more useful in the future. The success of their work is attracting trained men, who look to this as one of the most promising fields for research work in economic lines. The lack of trained men previously commented on has been met by thorough and conscientious training on our part of promising young men in our laboratory and field methods, so that we are practically independent in this respect and can meet any reasonable

demands which may be made for the extension of the work within the limits of the appropriation by Congress.

In our laboratories the problems of soil physics and soil chemistry are being intelligently studied and in certain lines effectually solved, but it is perhaps in our tobacco experiments that we have achieved the most striking results, measured by the immediate effects upon the cultivator and by the appreciation of the public. These experiments are based upon the soil survey, and they justify by their results the confident statement, as anyone who carefully reads this report can see, that what has already been done, to say nothing of what we hope to do in the future, has laid the foundation of added wealth to tobacco growers in this country aggregating yearly far more than the entire cost of the Division of Soils since its establishment.

With such results as have been already achieved we can certainly look forward with the utmost confidence to the results to be obtained by the Bureau of Soils with the larger appropriation and additional equipment which have been, and which may be, provided by the far-sighted liberality of Congress.

BUREAU OF CHEMISTRY.

Chemistry is a science which touches every branch of agriculture. In the organic act establishing the Department of Agriculture, among the scientific advisers whom the Commissioner of Agriculture was authorized to appoint, a chemist was first mentioned. The Bureau of Chemistry is the natural outgrowth of the Division of Chemistry, which was the first scientific office established at the time of the organization of the Department in 1862. The work of this branch of the scientific service has gradually extended until it has reached its present proportions. Gradually the chemical work of the Department of Agriculture has come to be regarded as the most important of all the chemical work for the Government. The scope of the work at the present time, together with the relations which have been established by it with other Departments of the Government, can best be illustrated by a brief statement of the nature of the investigations which have been conducted during the fiscal year ended June 30, 1901. During that period there were received for examination or analysis in the Division of Chemistry 3,824 samples of all kinds.

INVESTIGATIONS OF THE COMPOSITION, NUTRITIVE VALUE, AND ADULTERATION OF FOOD PRODUCTS.

The subjects of investigation have been, first, the study of the composition, nutritive value, and adulteration of food products. The work of the year has been devoted particularly to the study of preserved meats, with a view of comparing the preserved article with the

original, in respect of its composition and nutritive value, and to determine the preservatives, if any, which are employed in the process. This is a part of the elaborate work which has been carried on for many years in this line and which is recognized throughout the world as the most important contribution to this branch of agricultural science which has ever been made. The bulletins relating to the subject of the adulteration of foods, although printed in more than the usual numbers, have been entirely taken up by the demands from scientific men throughout the world, so that none remain now for distribution. The importance of this work has been recognized in a very practical way by the publication of a volume, by high chemical authorities, on food adulteration, in which it is stated that the contents of the work consist chiefly of the investigations of the Division of Chemistry and that the justification of its publication lies in the fact that the bulletins containing these investigations are no longer available for use.

The importance of securing pure food is of equal value both to the farmer and the consumer, and the efforts of the Division of Chemistry have been for many years and still are devoted to this great purpose.

EXAMINATION OF IMPORTED FOOD PRODUCTS.

In connection with this work, by special authority of Congress, the Division of Chemistry has examined food products imported into this country which are suspected of adulteration or of containing injurious constituents. While Congress has not authorized the Department of Agriculture in any way to protect the people of this country from frauds in food adulteration, it has conferred the authority upon the Department of protecting the health of our people from injurious substances imported in foods. The investigations during the past year have been devoted particularly to olive oils, preserved meats, and wines. The greater part of these investigations is considered of a confidential nature, and the results have not been published up to this time. It is believed, however, that the time will soon come when the results of these investigations can with profit be given to the public.

EXAMINATION OF FOODS INTENDED FOR EXPORT.

With a similar purpose in view, the Congress of the United States has authorized the Secretary of Agriculture, through the Bureau of Chemistry, to inspect American food products intended for export to foreign countries where chemical and physical tests are applied to the sale of foods. Unfortunately Congress did not give a sufficient appropriation to the Bureau of Chemistry to permit the execution of this law in a proper way. It is important that our food products going abroad be pure and wholesome, and that we protect our exporters

against any unjust discrimination in foreign countries. To this end an inspection, such as Congress provided for, is absolutely necessary. During the past year this inspection was devoted particularly to exported dairy products and wines, but it is hoped that Congress will provide for the extension of this work to all food products of every description.

INVESTIGATIONS IN CONNECTION WITH ASSOCIATION OF OFFICIAL AGRICULTURAL CHEMISTS.

The Division of Chemistry has continued during the year to study methods of analysis and investigation of soils, fertilizers, fodders and other feeding stuffs, tannins, sugars, and dairy products, in connection with the Association of Official Agricultural Chemists of the United States. This work, in which the Division of Chemistry has taken a leading part during the past sixteen years, has placed the agricultural chemists of this country on a plane which, for unity of action and purpose and the value of the results obtained, has enabled them to secure a higher position of authority and achievement than any of the other agricultural chemists of the world. There is, in other words, no organized body of agricultural chemists to-day which compares in efficiency and thoroughness of work with our own, and this has been due largely to the work of the Division of Chemistry, in collaboration with the agricultural chemists of our colleges and experiment stations.

WORK OF FOREST CHEMISTRY.

The work of forest chemistry in the Bureau of Chemistry is of the utmost practical importance to the investigations of forestry. This work is devoted to the study of forest products in regard to their composition, their relation to the soil, and the products which they can yield. When it is considered that many of the great technical chemical industries of the country are intimately dependent on forest products, the magnitude of this work is easily understood. Among these great interests the tanning industry stands, perhaps, first, followed closely by the industries devoted to the manufacture of wood pulp and to the distillation of wood and the production of wood spirit, methyl alcohol, acetone, pyroligneous acid, charcoal, and other products. This work is now thoroughly organized in the Bureau and will be prosecuted with still greater vigor.

WORK OF DAIRY CHEMISTRY.

The laboratory of dairy chemistry in the Bureau has been more fully equipped and organized and is devoted especially to a study of the best methods of detecting adulterated or preserved dairy products and of preventing unjust discrimination against these products in foreign countries by the application of crude or imperfect methods of analysis or in the exercise of discrimination in any way prejudicial to our interests.

STUDY OF SUGAR-PRODUCING PLANTS.

The sugar laboratory of the Bureau of Chemistry continues to study all the chemical problems relating to the production of sugar-producing plants and the manufacture of sugar therefrom. The chief part of the work is devoted to the study of sugar beets and especially to the influence of environment upon the sugar content thereof. This study is pursued systematically, in collaboration with the agricultural experiment stations, and has already revealed in a definite way the influence of the chief factors of environment, viz, temperature, sunshine, and soil, upon the sugar content of the beet.

Great interest has also lately been awakened in Georgia and Florida looking to the extension of the culture of sugar cane in those localities, and the Bureau of Chemistry has taken up a systematic examination of the soils on which the cane is grown and an analysis of the canes produced.

STUDY OF ROAD-BUILDING MATERIALS.

The laboratory for the study of road materials, established to cooperate with the Office of Public Road Inquiries, has been fully organized and is now one of the important sections of the work of the Bureau. The physical and chemical study of the materials used in building roads will lead to not only greater economy in road construction, but far greater durability. The cementation value of the materials used for surfacing a road differs so widely that the efficiency of the road depends upon the nature of this material. The investigations of this laboratory will show to road builders the exact character of the materials which it is proposed to use for surfacing and lead them to choose those which will give the highest efficiency.

The laboratory has in no way been advertised, except in the exhibit made at the Pan-American Exposition, owing to the limited facilities for carrying on the work; but even with this necessary precaution it has been impossible to keep pace with the heavy demand for tests. Samples have been received from all parts of the United States and even from our foreign possessions.

At the present time the laboratory has the equipment and facilities for testing all varieties of macadam rock, gravels, and clays, and in a short time the equipment for testing paving brick will be ready. In the testing of paving brick, not only will the physical properties of the manufactured brick be determined, but a thorough study will be made of the methods and materials used in making the various types of brick to aid the manufacturer as much as possible in improving his products. The prime object of this laboratory is to aid road builders in selecting the best available materials for their roads.

When it is considered that the cost of properly constructed macadam roads is from $3,000 to $10,000 a mile, and that the cost of paved

roads is generally much greater, it can be seen that selecting the proper material is a very important matter.

CHEMICAL WORK FOR OTHER EXECUTIVE DEPARTMENTS.

The work which the Bureau of Chemistry does for the other Departments of the Government is already great and is constantly increasing in magnitude. By arrangement with the Secretary of the Treasury, the chief of the Bureau of Chemistry has been designated as supervisor of sugar tests in the laboratories of the appraisers at the ports of New York, Philadelphia, and Boston. The control of this branch of the chemical work of the Treasury is of the utmost significance, as sugar furnishes a larger revenue than any other one item imported into the United States. Many suits have been brought against the United States on the alleged grounds of collecting a higher duty than the law contemplates on imported sugar, and this fact led the Secretary of the Treasury to solicit the cooperation of this Department in securing the highest possible accuracy in the scientific ascertainment of the amount of duty to be levied.

For the War Department the Bureau of Chemistry has continued to examine many of the articles of food, clothing, and other supplies for the Army, and this work is continually increasing in magnitude.

For the Post-Office Department the Bureau of Chemistry continues to examine all articles which are supposed to be unmailable under the law or fraudulent in nature.

For the State and other Departments the stationery and inks which are used in producing records are examined in the Bureau of Chemistry.

For the Department of the Interior the Bureau of Chemistry has undertaken a thorough examination of the hot springs in the reservation at Hot Springs, Ark.

Many other miscellaneous items are submitted by the various Departments of the Government for investigation in the Bureau.

It is thus seen that not only is the Bureau of Chemistry charged with chemical investigations of all kinds which relate to agriculture, but also has gradually extended its investigations to the necessities of other Departments. It has thus gradually grown to be recognized as the leading chemical laboratory of the Government, to which all of the Departments have recourse in cases of need for chemical work. It is hoped that Congress will provide for this expanded work of the Bureau of Chemistry, since chemical work can be more economically and efficiently done under a common supervision rather than by the establishment of separate laboratories for every character of investigation.

BUREAU OF FORESTRY.

The work of this Bureau includes the making and execution of working plans for Federal, State, and private forest lands; the study of forests, forest fires, forest grazing, commercial trees, lumbering, and

forest products; the study of economic tree planting and the preparation of planting plans. The Bureau is cooperating with the Federal Government, with several States, and with many private owners in handling their forest lands. Its assistance has been asked for a total area of 52,170,036 acres, of which about 4,000,000 acres are held by lumber companies and other private owners. In its studies of commercial trees and forests, and of their forest problems, it is pursuing lines of investigation indispensable to the development and perpetuation of our national forest resources. Its work of tree planting on the treeless plains already involves the making of planting plans for many thousands of acres of wood lots, shelter belts, and commercial plantations.

On the 1st of July of the present year the Division of Forestry became a Bureau. The change was incidental to the partial reorganization of the Department of Agriculture by Congress at its last session, but it was brought about by the increased understanding of the need of forestry among our people, and especially by the appreciation in Congress of the practical methods used by this Department in its forest work. The change from a Division to a Bureau opens a way for larger organization and more extended work which the public and private demands for assistance in practical forestry have made imperative. The work of the Bureau of Forestry is now conducted along three principal lines: First, forest management, which involves the preparation and execution of working plans for Federal, State, and private forest lands; second, forest investigation, which includes the study of commercial trees, of economic tree planting, of forest fires, grazing, lumbering, forest products, and other important lines of research; and third, the making and maintenance of records, which covers the routine work of the Bureau and the care of its library, laboratory, and photographic collection.

I am glad to report that the Bureau, under its present organization, can meet much more effectively the demands made upon it than was possible as a division. During the fiscal year these demands have not only increased along lines already established, but the growing tendency to refer all important forest matters to the Bureau has been more marked than at any time in the past.

The demands for the assistance and advice of the Bureau are insistent and widespread, and its sphere of usefulness has extended widely with the sound and steady development of the forest movement. With the added effectiveness of its present organization, the adequate extension of its field force, now first made possible by the training of men in our forest schools, and the urgently growing need of its services, the Bureau of Forestry has before it a future rich in possibilities for useful work if its resources do not fall too far behind its actual needs. I have not hesitated to recommend a considerably increased appropriation for the Bureau of Forestry for the coming fiscal year,

because of the vast interests which depend on forest preservation and wise use. In a very real sense an appropriation for these purposes protects and promotes the interests, among others, of all that vast body of our citizens to whom the success of irrigation, mining, grazing, transportation, or the timber trade are of primary importance.

The rapid progress of interest in forestry throughout the South is most gratifying. A very considerable proportion of the most important recent work of the Bureau of Forestry lies in the Southern States.

With the view to encouraging the substitution of conservative for destructive methods, the Bureau has undertaken the preparation of working plans, giving full directions for the management of forest tracts, and will also afford practical assistance on the ground, without cost to the owners of wood lots. In the case of large tracts, however, the cost of traveling expenses and subsistence, together with the necessary helpers of the agents of the Bureau while in the field, must be borne by the owner.

FOREST MANAGEMENT.

The requests upon the Bureau of Forestry from private owners for practical assistance and advice in the handling of their forest lands continue steadily to increase. Of the recent requests for assistance the most noteworthy is the joint application of the Kirby Lumber Company and the Houston Oil Company for help in devising the best method of managing 1,000,000 acres of long-leaf pine land in Texas. This area includes considerably more than half of the long-leaf pine lands in that State.

Personal examinations in the woods were made during the year of 788,890 acres of private ownership, and four detailed working plans were prepared, covering an area of 226,000 acres. One of these was for the tract of a lumber company in Arkansas and another for a tract in Missouri owned by the Deering Harvester Company. The preparation of working plans was begun upon five timber tracts of private ownership, with a total area of 628,000 acres. The largest of these consists of 300,000 acres in Maine, owned by the Great Northern Paper Company. The fact that the offer of cooperation under which these working plans are made is being taken advantage of so extensively by lumber companies and other business organizations indicates clearly the real practical value of the Bureau of Forestry to private owners.

The preparation of working plans for the Federal forest reserves goes steadily on. The working plan for the Black Hills Forest Reserve has been completed, and working plans have been begun for the Prescott, the Bighorn, and the Priest River forest reserves. The immense labor involved in some of these plans is indicated by the fact that for the Black Hills plan alone the diameter of every tree, large or small, was measured on 10,234 acres, and complete ring countings were made

for 4,500 trees. All these field measurements require painstaking elaboration in the office.

In cooperation with the State of New York, which appropriated $3,500 for that purpose, the field work necessary to a working plan for townships 5, 6, and 41, Hamilton County, in the Adirondack Forest Preserve, has been completed. The results of similar cooperation on township 40 have already been printed in the form of a complete working plan.

FOREST INVESTIGATION.

Studies of commercial trees, the practical advantages of which are becoming more and more evident, were continued during the year and extended to many species hitherto not investigated. Extensive studies of the redwood, red fir, and hemlock of the Pacific coast have been completed and are ready for publication. Other trees under investigation are the Western yellow pine, the loblolly and short-leaf pines, the more important Southern hard woods, the Adirondack balsam, and the second-growth hard woods of New England. The location, size, and ownership of the Big Tree groves in the California sierras have been thoroughly studied for the first time, and much fresh information has been obtained of the character of the tree.

The region containing the proposed Appalachian Forest Reserve was examined in cooperation with the United States Geological Survey. The forest on 9,600,000 acres was mapped, the lands were classified, and a careful study was made of the forests. The result of this examination will be embodied in a report dealing with the suitability of this region for the purpose of a national forest reserve, the cost of such a reserve to the Government, and the good which would result from its careful and conservative management.

The creation of the proposed reserve is, in my judgment, urgent, in order to protect the headwaters of important streams, to maintain an already greatly impaired supply of timber, and to provide a national recreation ground which, with the single exception of the Adirondacks, will be readily accessible to a larger number of people than any other forest region in the United States. I believe that these considerations render the purchase by the Federal Government of the proposed reserve in the Southern Appalachians desirable in every way. The policy involved is not new. The proposed purchase will not involve the creation of a precedent, for that has already been done. In 1896 the Government purchased from the Blackfeet Indians of Montana an area of approximately 615,500 acres for the sum of $1,500,000, and on February 22, 1897, it became a part of the Flathead Forest Reserve.

A study of the Sierra Forest Reserve has been undertaken, also in cooperation with the United States Geological Survey, and will shortly be completed.

Following the request of the Secretary of the Interior for reports on technical forest matters, the effect of grazing and of forest fires was investigated in twelve of the forest reserves. A study of the present forest condition of Nebraska and of the causes which led up to it was begun and pushed far toward completion.

The Bureau is now conducting an investigation in the South to devise conservative and practicable methods for improved turpentine orcharding. Since the maintenance of the naval-stores industry is of urgent necessity in the Southern States, this investigation is one of the most important now being carried on by the Bureau.

FOREST EXHIBITS.

The forest exhibit of this Department at the Pan-American Exposition was superior in size and quality to that at the Paris exhibition, which was awarded a gold medal. It included the largest colored transparencies ever made.

TREE PLANTING.

One of the most important and promising lines of work of the Bureau of Forestry is its study of economic tree planting and its cooperation with farmers and others in making forest plantations. Tree planting has so vital and intimate a relation to the welfare of the farmer in the treeless regions that whatever assists him to grow trees assists him also in the production of every other crop. Forty-six thousand one hundred and forty-five acres were examined for planting during the year, and planting plans were prepared for 5,785 acres, while 148 applications for tree-planting plans have been received. The number of applications for commercial plantations of large size is increasing so rapidly that the usefulness of the practical assistance and advice offered to the tree planters will be limited only by the men and money available for the work.

A series of important measurements of the growth of planted groves in the treeless plains has been begun in order to show the value of plantations as business investments. A careful study has been pushed during the year of the encroachment of forests on the Western plains in order to determine the possibility of reclaiming portions of non-agricultural Government land by planting forests.

OFFICE OF EXPERIMENT STATIONS.

PROGRESS OF THE STATIONS.

During the past year the Office of Experiment Stations has made a broad inquiry to determine how far the operations of the agricultural experiment stations are conducted with special reference to the agricultural needs of their respective States and Territories. This inquiry

has shown conclusively that by far the largest part of the work of our stations has direct relation to the important agricultural interests of the communities in which they are located. It has also shown that the nature of the operations of the stations is becoming better understood by our farmers, and that the desirability of more thorough and far-reaching investigations is much more appreciated than formerly. A broader and deeper foundation of scientific inquiry is being laid each year, and there is a constant accumulation of data regarding the general agricultural conditions of the different regions of the United States. The climate, soil, water supply, native and cultivated plants, injurious insects, fungi, and bacteria are being studied in more detail and with greater thoroughness than ever before. Best of all, this scientific work is having a beneficial effect on more practical operations of our stations. These are assuming a more substantial and systematic character, and are being conducted with more definite relation to actual conditions. They have, therefore, a greater assurance of successful practical outcome.

Questions relating to the introduction of plants or to the improvement of the live-stock industry in any region, for example, are now being investigated with a strict relation to the real requirements of the agriculture of that region, which would have been impossible a few years ago. Public attention has recently been strongly and favorably attracted to the successful results of the work of our stations, in cooperation with this Department, in making it possible for our farmers to have an abundant supply of forage for their live stock under varied regional and climatic conditions. The relatively large use which is now made of such crops as alfalfa, kafir corn, cowpeas, and rape is generally acknowledged to be due to the persistent and well-directed efforts of the stations and this Department. This is a matter of very great importance to our agriculture when we consider the vast interests involved in the animal husbandry of the United States.

In some ways the past year has been notable in the progress of agricultural research in this country. The results of practical importance already attained have inspired the public with such confidence in the value of this kind of investigation that Congress and State legislatures have been unusually liberal to this Department and the experiment stations. At the same time business enterprises requiring scientific and expert knowledge and skill for their successful management have been unusually prosperous. The managers of these enterprises have awakened to a much clearer appreciation of the value of the services of such men as are most successful workers in our institutions for agricultural education and research. An increasing number of our best workers in these institutions have therefore been given very attractive offers from the business world. So many public and private positions for well-trained and experienced workers in agricultural science and

research have been opened that in some lines the demand has outrun the supply. This has led to numerous changes in the personnel of our experiment stations, partly through the transfer of their officers to outside enterprises and partly through the change of officers from one station to another on account of differences in salary and other attractions. This is a remarkable state of things considering the length of time during which our stations have been in operation, and brings them face to face in a measure with the same difficulties which attended their earlier operations, when, for different reasons, there was an inadequate supply of trained workers.

As the work of the experiment station makes a more definite impression upon the public mind, and is more clearly differentiated from that of the agricultural college as a whole, the State legislatures are called upon to make special appropriations for investigations by the stations. A notable example of this was the action of the recent legislature in Illinois, which appropriated $46,000 for the next two years, to be expended as follows: Experiments with corn, $10,000; soil investigations, $10,000; investigations in horticulture, $10,000; experiments in stock feeding, $8,000; dairy experiments, $5,000, and sugar-beet experiments, $3,000. A number of States recognized the special agricultural needs of different localities by appropriations for substations or independent stations devoted to these interests.

In further recognition of the experiment station as a distinct unit within the college, separate buildings or parts of buildings are now more generally provided for the exclusive use of the station. The movement for the separation of the office of director of the station from that of president of the college has also been advanced by changes in this direction in six States, leaving at present only eleven States and Territories in which the college president actually performs the functions of director of the experiment station. In a number of instances newly appointed officers of experiment stations have no duties as teachers in the college, and in other instances changes have been made by which the amount of teaching required of station officers has been materially reduced. Experience has each year shown more conclusively that if station officers are to accomplish the best results in agricultural investigations their research work must be made their primary business before which routine duties of every kind must give way as the conditions of the original work demand. Our most successful stations are now managed on the principle that they constitute research departments of the colleges; that they are thus at the summit of our system of agricultural education, and that they must be managed on the same principles as those upon which the scientific laboratories in this Department and our leading universities are conducted—that is, their officers must be the best trained experts in their respective lines, and they must be able to devote their time and energy quite fully to their investigations.

COOPERATION OF THE STATIONS WITH THE DEPARTMENT.

The number and variety of cooperative enterprises between the different Bureaus and Divisions of this Department and the experiment stations have greatly increased during the past year. Progress has also been made in determining the principles on which successful cooperation must be based and the best methods of arranging and conducting such cooperation. Without doubt the Department and the stations are now in closer touch than ever before, and through their cooperation important investigations for the benefit of agriculture in many parts of the country have been greatly strengthened. Now that the preliminary questions relating to the organization of these cooperative enterprises have been largely settled and the funds which can be devoted to this kind of work have been increased, there will be a further extension of cooperative effort in the immediate future. By this combination of forces the varied national and local needs of our agriculture will be more fully met, and the benefits of agricultural research will be extended to every part of our territory. Thus we shall have a system of agricultural investigation more thorough in its organization and more wide reaching in its scope than exists anywhere else, and this vast system for the direct application of the results of scientific inquiry to agricultural practice has been so constituted that every farmer throughout the length and breadth of our land may easily and freely avail himself of whatever information is gained through the researches of this Department and the stations.

AGRICULTURAL EXPERIMENT STATIONS IN ALASKA.

Agricultural investigations in Alaska have been continued, with headquarters at Sitka and subsidiary stations at Kenai, on Cook Inlet, and Rampart, in the Yukon Valley. The chief new feature of these investigations during the past year has been the more thorough study of the agricultural possibilities of the interior, especially the Yukon Valley. For this purpose Professor Georgeson, the agent in charge of the Alaska experiment stations, made journeys into the interior during the summers of 1900 and 1901. As the result of the first of these journeys a tract of land on the north side of the Yukon River, directly opposite the town of Rampart, was selected for experimental purposes, and field experiments with rye, barley, oats, wheat, and vegetables were inaugurated. Rye seeded in the fall of 1900 wintered perfectly and was ripe early in August, 1901. Barley sown in the spring of 1901 ripened at the close of that season. Vegetables were largely destroyed by rabbits, and even those which escaped did not grow well in a new soil, confirming previous experience that it requires two or three years in Alaska to get new soil in proper tilth for vegetables. Vegetables are, however, successfully grown at the Holy Cross Mission and other points in the Yukon Valley. Professor

Georgeson reports that while he was at the Holy Cross Mission during the second week in August, 1901, "the mission was supplied from its own garden with new potatoes, cauliflower, cabbage, and other vegetables." At Sitka the experiments with cereals, forage crops, and vegetables were continued, and a considerable number of varieties were successfully grown. A log silo was also built there and filled with native grasses during the latter part of September, 1900, of which Professor Georgeson says: "The experiment was an entire success. Our work oxen were fed exclusively on silage from November 10 to May 1, and only when they were worked were they fed grain in addition. They ate the silage with relish throughout and were maintained in good condition. There was no greater loss of silage by waste than always occurs in preserving green forage."

At Kenai experiments with cereals and vegetables have been continued, with considerable success. Fall-seeded wheat survived the winter of 1900–1901 in fair condition, and spring-seeded oats, barley, buckwheat, flax, and wheat looked very promising early in September, 1901. A small plat of red clover sowed in the spring of 1900 wintered over well and made a good growth during the summer. The greater portion of the grain sown last spring at this station was from grain previously grown there, showing that grain can be matured and propagated in that region. Besides the experimental work at Sitka, Kenai, and Rampart, seeds have been distributed to over 400 persons living in different parts of Alaska, and a considerable number of reports have been received from seeds grown there during the season of 1900. There is a considerable increase in the demand for seeds, now that it is known that they are being distributed through the station. Not only are vegetables, cereals, and forage plants asked for, but there is a considerable demand for flower seeds. There seems to be a great desire on the part of a certain class of settlers in Alaska to cultivate flowers, which are more than ordinarily prized in a region where the general conditions of life are so comparatively hard.

WORK OF THE STATIONS AT SITKA AND KENAI, ALASKA.

During the summer of 1901 the assistant director, Dr. E. W. Allen, of the Office of Experiment Stations, made a tour of inspection to the stations at Sitka and Kenai, and also made inquiries regarding the agricultural possibilities of the coast region of Alaska. The following extracts are taken from his report:

> The impression which I gained from this Alaskan trip was that not only is quite a wide range of gardening and some measure of agriculture possible, as has been shown by the Congressional reports of our experiments there, but that a gratifying amount of educational and demonstration work has been done among the people, which is already productive of good results. A number of private residences about Sitka show what can be accomplished by well-directed industry in beautifying them and in maintaining creditable home gardens. Many of the natives plant gardens of

vegetables and flowers, and a considerable number give them fairly good care. Near the town men were engaged in making hay on a small tract, and, with the weather prevailing at the time of my visit, it was quite practicable to dry the hay in the field. Numerous gardens containing lettuce, radishes, cabbage, peas, potatoes, and the more hardy vegetables generally were to be seen at the various places where I landed along the way. These gardens were for the most part well cared for and usually an object of pride. The quality of the vegetables raised was said to be excellent, and failures were few with persons who understood the best methods. At Kenai the gardens of the natives presented an especially well-cared-for and thrifty appearance. In many places the natives have come to appreciate the value of vegetable food in improving their diet, and the variety which a garden of fresh vegetables lends to the food of the newer residents of Alaska is much appreciated by them. Flower beds of sweet peas, peonies, and a number of other kinds of plants were not uncommon.

The seed for planting these gardens and the directions and encouragement for maintaining them have come very largely from the special agent in charge of the Alaska station and his superintendents. Everywhere I went along the coast region I found that the work of the Alaska stations was well known and usually very favorably regarded at present, although many admitted that they at first viewed the undertaking with much skepticism. Hardly a man was addressed who did not know about Professor Georgeson and his work. This is the more remarkable, and stronger evidence of the interest which has been aroused, when it is considered that there are practically no newspapers in Alaska having more than a local circulation, that no publications except Congressional reports have been issued, and that, owing to the difficulties of transportation, people do not get about as much as they do in the States. The extent to which information has been diffused and the confidence of the people won speak much for the vigor and industry with which the work has been prosecuted. The propaganda has met with a good measure of success, and the work now has many strong friends, particularly in the western coast region, where the conditions are the most suitable for agriculture.

I was impressed with the many difficulties which our agent has had to meet in carrying on his work under such pioneer conditions at a number of points widely separated. Transportation is entirely by water and is slow, mails are infrequent, the need for materials of various kinds must be anticipated several months, labor of the right kind for our work is very difficult to procure, the results must be accomplished in a short summer season, and a thousand and one little annoyances arise to hinder and discourage the undertaking. It is only through untiring energy and enthusiasm for the work and the exercise of the strictest economy that Professor Georgeson has been able to make the good showing that he has for the time and money he has had at his disposal. I do not hesitate to say that, despite these difficulties and the higher prices to be met, few if any of our experiment stations in the early years of their existence have been able to make a better showing for the money expended, in the way of buildings, permanent improvements to the land, and amount of experimental work performed, than the Alaskan stations do to-day, and the interest and confidence which have been aroused by the stations are worthy of any station in the newer States.

Now that such favorable results have been obtained with vegetable growing and some of the cereals, I am of opinion that work might be undertaken with animals to show the extent to which feed for them can be profitably or economically grown in Alaska. Fresh meat is scarce and dear. It is only occasionally that meat can be obtained to the west of Sitka. With small animals, like poultry, useful work might be done in showing what feeds can be grown for them and how they can best be cared for. Poultry raising would be the simplest beginning in animal production and might lay the foundation for work with larger animals. The hog is not commonly found, but summer pasturage for hogs could surely be raised, and it seems very probable

that winter feed could be grown also. The profitability of hog raising in a small way and the quality of the pork which could be produced without corn would be a good subject for investigation. Cattle raising and milk production have been tried as a business venture on a small scale at a few places. In most instances, however, the feed for the animals has been very largely shipped in, and it remains to be demonstrated to the satisfaction of the people at large at least that the necessary grain and feed can be profitably raised, so that products of good quality can be made without relying upon feeds imported from Puget Sound.

From the experience already had I am inclined to regard the raising of cattle for beef and for milk production in Alaska as entirely feasible. There are good pastures in places and natural meadows where hay of good quality can be made. From a commercial point of view the present freight rate on live cattle from Seattle to the Cook Inlet region would give the local cattle raiser the advantage of a protective tariff. Kenai and Kadiak seem well adapted to experiments of this nature and are representative of quite large areas of country. I would recommend that the building up of a herd of cattle with reference to conducting experiments in the feasibility and profitability of beef and milk production, using home-grown products to the largest possible extent, be taken up as soon as circumstances and the funds at the disposal of this work will permit.

From all the evidence received at this Department it seems clear that the agricultural investigations already conducted in Alaska have been productive of good results, and that by persistent effort sufficient agriculture may be established in this Territory to be an important aid in the development of mining, lumbering, and fisheries. To put the work of the stations on a more effective basis, funds should be provided for the completion of the headquarters building at Sitka, the erection of buildings at Kenai and Rampart, and the further equipment of the stations there, for the employment of an expert horticulturist, whose services are greatly needed, and for the purchase of live stock. The annual appropriation for the regular expenses of the Alaskan work should be at least as much as that for the experiment stations in the other Territories, namely, $15,000. For the ensuing fiscal year I recommend that an additional appropriation of $5,000 be made for buildings and the purchase and transportation of live stock.

AGRICULTURAL EXPERIMENT STATION IN HAWAII.

The first appropriation ($10,000) for the establishment and maintenance of an agricultural experiment station in the Territory of Hawaii was made for the fiscal year covered by this report. With a view to determining the conditions existing in Hawaii with reference to experimental investigations as related to the needs of the agriculture of that Territory and the location of an experiment station, Dr. W. C. Stubbs, director of the Louisiana Agricultural Experiment Stations, was sent to Hawaii, as stated in my previous report, where he made a careful investigation with special reference to the organization and work of an experiment station. His report was transmitted to Congress in January, 1901, and published. Besides much valuable information regarding the agriculture of Hawaii, this report contains definite rec-

ommendations regarding the location, equipment, organization, and lines of work of the proposed experiment station in that Territory. It was recommended that the station be established under the direct control of this Department and independent of existing local institutions. As the station already maintained by the Hawaiian Sugar Planters' Association will continue its work on problems relating to the sugar industry, it was recommended that the station to be established by this Department give its attention to other agricultural interests.

It was pointed out that among the subjects to which the station should give special attention were the culture of fruit, vegetables, rice, forage crops, stock raising, dairying, coffee growing, irrigation, and forestry. As the headquarters for the station, it was recommended that the reservation which the Hawaiian Government had surveyed and mapped in 1893 for an experimental and forestry station be secured. This is a tract of 222 acres near Honolulu, known as Kewalouka, with an elevation ranging from 50 to 1,000 feet and containing cleared and forest land. On the basis of this report a second appropriation of $12,000 was made for the maintenance of an experiment station in Hawaii during the current fiscal year. Immediately on the passage of this appropriation act I took measures for the establishment of an experiment station in Hawaii on a permanent basis. As in the case of the stations in Alaska, the general supervision of the Hawaiian Experiment Station was assigned to the Director of the Office of Experiment Stations. As the active manager of a new station Mr. Jared G. Smith, chief of the Section of Seed and Plant Introduction of this Department, was selected and transferred to the Office of Experiment Stations as the special agent in charge of the Hawaii Experiment Station. He left Washington near the end of March, 1901, and proceeded without delay to Honolulu, with instructions to establish headquarters there and to begin the organization of regular experiment-station work.

As a site for the station he was to secure possession of the tract of land in Honolulu known as Kewalo-uka, and on this to begin the clearing and fencing of land and the erection of buildings. In making plans for experimental work he was instructed—

> to consider especially the needs of the people of the Hawaiian Islands as regards the production of food supplies for home consumption, and the development of animal industry, dairying, and coffee culture, and to extend aid to the people of the different localities throughout the islands for the improvement and development of local agricultural industries through the distribution of seeds, plants, and publications, the giving of advice by correspondence and otherwise, and the institution of cooperative experiments.

He was urged to enlist the cordial support and sympathy of the Hawaiian government and people in this enterprise, and he was to announce that it would be the policy of the Department "to encourage the granting of financial assistance to the station by the Hawaiian

government, as in the case of the other States and Territories where the national funds have been largely supplemented by local grants of money for buildings, equipment, and current expenses of the station."

On examination of the records of the Hawaiian government before the annexation of this Territory to the United States it was found that while there were evidences of the intention of that government to reserve the Kewalo-uka tract for experimental purposes, the reservation had never actually been completed. Soon after the annexation of the Territory, on recommendation of the Secretary of the Navy, the President issued a proclamation (November 10, 1899) reserving 20 acres, more or less, of the best agricultural land of this tract as a site for a naval hospital, and on recommendation of the Secretary of the Treasury another reservation of 7 acres has been similarly made as a site for a hospital for the Marine-Hospital Service. Through the courtesy of the Secretary of the Navy, this Department has been granted the temporary use of the naval hospital site for experimental purposes. After negotiations with the government of the Territory of Hawaii, the larger portion of the Kewalo-uka tract was definitely set aside in proclamations issued by the acting governor of the Territory for the use of the experiment station, to be conducted under the direction of the Secretary of Agriculture.

About 50 acres of land have been cleared, and half of this area has been plowed and harrowed. This includes 13½ acres of forest land on the upper portion of the reservation, where there is sufficient rainfall to make it possible to carry on experiments without irrigation. This will be devoted to horticultural plantations, and in this way will be covered with trees again. A water system has been provided by the erection of several large tanks, which are connected with the city water system and operated with the aid of a gasoline engine and pump. The following buildings are in process of erection: Residence for the special agent in charge, office and laboratory, one frame cottage and two grass huts for laborers, one stable, and one covered manure pit.

Plantings of taro, the principal food plant of the islands, have already been begun with the special object of studying a disease which plays havoc with that crop. This is an important matter, as probably 50 per cent of the working population in these islands depend on taro for their daily food, and within the last decade the price of taro has increased 500 per cent because of the losses from this disease and the attendant deterioration in quality and yield of crop. There are many other fungus diseases of fruits and vegetables prevalent on the islands in Hawaii which should be studied. Some poultry experiments have also been inaugurated, with a view especially to finding a way of raising healthy barnyard fowls in these islands, where hitherto the supply of poultry has kept below the demand because of the losses from the ravages of diseases. It is reported that live chickens sell in

Honolulu markets for $15 a dozen, and eggs at from 40 to 50 cents a dozen. Owing largely to the insufficient supply of forage, pork production is very expensive, the ruling price for hogs in the Honolulu markets being from 10 to 17 cents a pound on the hoof. To remedy this difficulty experiments with various tubers and roots and with the common Papaya as feed for swine will be undertaken at an early day, and as soon as possible investigations in dairy husbandry will be inaugurated. Plans are also being made for experiments in horticulture, including both fruits and vegetables, and coffee culture.

Among other subjects needing the attention of the station are investigations on methods of cultivation, use of fertilizers, drainage, irrigation, and forestry. Considering the variety of subjects for investigation, the annual appropriation for the maintenance of the Hawaii experiment station should be not less than $15,000. To properly equip it with buildings, apparatus, implements, live stock, etc., a special fund of $10,000 is very much needed. Now that Hawaii is organized as a Territory of the United States, I see no good reason why in the matter of an agricultural experiment station it should receive different treatment from that accorded other Territories—that is, it should regularly receive the same appropriation as is given the other Territories under the act of Congress of March 2, 1887. The further needs of the experiment station, especially as regards land, buildings, and equipment, should be provided by the people of the Territory, acting through their Territorial legislature.

PORTO RICO AGRICULTURAL EXPERIMENT STATION.

The first appropriation for agricultural investigations in Porto Rico was made for the fiscal year ended June 30, 1901. This appropriation was $5,000 and authorized the Secretary of Agriculture to determine the agricultural conditions existing in that island, with special reference to the most desirable localities for agricultural experiment stations, as well as the subjects on which the agricultural people of the island are in most immediate need of practical information, and how this need can be most economically and effectively supplied, but it did not provide for the establishment and maintenance of an experiment station.

The preliminary investigation called for by this appropriation was made through the Office of Experiment Stations by Prof. S. A. Knapp, who visited Porto Rico during the summer of 1900. His report was transmitted to Congress and published. It contains a summarized statement regarding the climate, soil, and agriculture of the island, shows in what ways the experiment station might benefit agriculture, and recommends the establishment of a station as soon as practicable. On the basis of this report Congress made a second appropriation ($12,000) for the current fiscal year, and authorized the Secretary of Agriculture to establish and maintain an agricultural experiment

station in Porto Rico. As soon as this appropriation was made measures were taken for the establishment of the station in Porto Rico. The general supervision of this station was assigned to the Director of the Office of Experiment Stations. As the active manager of the station, Mr. Frank D. Gardner, assistant in the Division of Soils, was selected and appointed special agent in charge of the Porto Rico experiment station. He proceeded to Porto Rico about the middle of May, 1901, and after spending some time in familiarizing himself with the conditions and needs of agriculture in the island he has arranged to undertake preliminary investigations on coffee culture.

SELECTION OF EXPERIMENT STATION.

As regards the permanent location of the experiment station, more difficulty was experienced in obtaining suitable land than was anticipated. As there is no Government land available, it will be necessary to purchase land for this purpose. An effort has been made to secure donations of land from the municipalities in the island. It was found, however, that either the municipalities possessed no lands that in kind and amount would be suitable for the purpose or that their financial condition would not allow them to purchase land for the station. It was therefore determined that action in this matter should be deferred until the next meeting of the insular legislature, when an effort will be made to secure local financial aid in the establishment of the station, as in the case of the other States and Territories. Meanwhile the headquarters of the station will be maintained at San Juan, and such investigations will be undertaken as can be pursued on lands leased or loaned by residents of the island desiring to engage in cooperative work with the station. Information regarding the agricultural needs of the island and methods which may be adopted for the improvement of agriculture on the basis of our present knowledge will be collated and published, and the people will be aided in this and other ways to improve the agricultural conditions. It is hoped that before the beginning of another fiscal year the question of the permanent location of the station may be settled and that then it may be possible to proceed rapidly with the erection of buildings, the equipment of the station with apparatus, implements, and live stock, and the making of horticultural and other plantations, as well as the institution of experimental inquiries which will place this station on a par with the others in the United States. For the regular maintenance of an experiment station in Porto Rico, as elsewhere, not less than $15,000 will be required annually. I therefore recommend that Congress appropriate this sum for the Porto Rico station for the ensuing fiscal year.

AGRICULTURAL INVESTIGATIONS IN THE PHILIPPINES.

It is, in my judgment, very desirable that agricultural investigations should be undertaken in the Philippine Islands under the War Depart-

ment, and in cooperation with this Department. The need of such investigation is illustrated by the fact that such an important crop as rice, the leading breadstuff of the island, is not at present produced in sufficient quantities to supply the local demands. The growing of rice is better understood by the people generally than any other crop, yet by their primitive methods of culture and crude implements they are unable to adequately supply their own necessities. Of agricultural products—mostly food stuffs—up to 1890 there were imported annually more than $4,000,000 worth, while the exports amounted to about $14,000,000, principally hemp, sugar, coffee, and tobacco. Under the Spanish Government attempts were made to establish agricultural schools, experiment stations, and model farms, but these institutions do not seem to have exerted any important influence for the improvement of agriculture, and since the American occupation have been largely discontinued.

In instituting agricultural investigations in the Philippines it is desirable, in my judgment, to follow the precedents already made in the cases of Alaska, Hawaii, and Porto Rico—that is, a preliminary investigation should be made to determine where the experiment station should be located and what subjects it should first undertake to investigate. With headquarters for agricultural investigations once established and a single experiment station well organized, it would be easy to extend the work of agricultural research so that it would take into account the special needs of different localities. In order that there may be no delay in establishing the station after the preliminary investigation is completed, I recommend that an initial appropriation of $15,000 be made for the ensuing fiscal year to enable me to institute agricultural investigations in the Philippines, and if feasible to locate and maintain an agricultural experiment station there. In order that these investigations may be begun at an early day, one-third of this amount should be made immediately available.

AMERICAN INSTITUTIONS FOR AGRICULTURAL EDUCATION.

Considerable progress has been made during the past year in broadening and strengthening the agricultural courses in our agricultural colleges. The movement for the division of the general subject of agriculture into specialties to be taught by different instructors still continues. The committee on methods of teaching agriculture of the Association of American Agricultural Colleges and Experiment Stations, of which the Director of the Office of Experiment Stations is a member, has completed its syllabus for a college course in agriculture by presenting courses in agrotechny (especially dairying), agricultural engineering, rural economics, animal husbandry, soil physics, plant pathology, and agricultural chemistry. Thus far, comparatively little attention has been given to several of these branches of agricultural

instruction in our colleges. There are, however, beginnings of a movement for the regular establishment of such courses, which there is good reason to believe will grow with the increase of the resources of these institutions and the demands of the people. There has been a considerable increase in the total number of students attending agricultural courses in the colleges, but college faculties have in many cases failed to offer sufficiently attractive four-year courses to induce students to attend, or the trustees have failed to equip faculties with teachers who have mastered their specialties. There is a growing demand for this education, and where it does not exist the college should create it as in duty bound. There is an increasing demand for short and special courses, and the colleges are meeting this to a greater extent than ever before. A much larger amount of college extension work in agriculture is now being done. In the States in which this work has been in progress for a number of years it is being successfully continued, and institutions in other States are following the example of the pioneers in this line of education. In providing for maintenance and new buildings at the agricultural colleges, the various State legislatures meeting during the past year have been more than usually liberal, so that in the aggregate there is a large increase in the resources of these institutions.

One of the most hopeful signs of progress in agricultural education is the movement for the establishment of secondary schools of agriculture and the introduction of nature study and the elements of agriculture into the rural schools.

This Department is already giving aid to the rural schools in various ways, but I believe that the time has come for the Department to take a more active part in encouraging the introduction of nature study and elementary agriculture into the curricula of rural schools for the purpose of developing the natural tendencies of the pupils to observe and take an interest in the natural phenomena surrounding them and of fostering in them a love for the country and its pursuits.

Much encouragement may be given by distributing seeds and plants for use in establishing school gardens; by furnishing schools with collections of specimens of beneficial and injurious insects, plant diseases, and other illustrative material; by supplying teachers with the publications of this Department which will be useful to them, and by such other means as would suggest themselves as the work progressed. Without doubt, the improvement of our rural schools, so that every child throughout the length and breadth of our land may have an opportunity for education which will prepare him for good citizenship and most efficient industrial service, is one of the greatest which should engage the attention of our people. With the increased interest in country life which is beginning to be manifested in different parts of the country, there is good reason to hope that our rural

schools will be much improved in the near future, and especially that they will be so organized and maintained that in them the children will be shown the attractive side of country life and will be taught the dignity and worth of rural occupations, so as to incline them toward the study of the sciences that relate to agriculture.

FARMERS' INSTITUTES.

The farmers' institute movement in this country has now become national in its extent and in the scope of its interests, and has even assumed international relations as connected with similar movements in other countries. Having their origin in farmers' societies of various kinds, some of which date back half a century or more, the institutes have been developed through the efforts of farmers' organizations, the agricultural colleges and experiment stations, boards and commissioners of agriculture, and many individual leaders in agricultural progress, until they are now annually held with more or less regularity in nearly all the States and Territories. Beginning about thirty years ago the States have one after another shown their interest in this movement through their legislatures by appropriations to aid the institutes. Growth of interest in the institutes among the farmers has been reflected by a steady increase in the number of States thus providing for their maintenance and by the larger amounts of money devoted to this purpose from year to year. According to statistics published by the Office of Experiment Stations, in 1891 about $80,000 was spent for farmers' institutes in the United States, and of this sum about $60,000 was specifically appropriated for this purpose. In 1899 the specific appropriations for institutes aggregated a little more than $140,000, more than twice the sum appropriated in 1891, and the estimated expenditure of funds derived from other sources was $30,000, a grand total of more than $170,000 spent for institutes that year. The statistics of the institutes for the past year have not yet been collated, but the incomplete returns already received show that the State legislatures of last winter were more liberal than ever before to this enterprise.

While the statistics of the institutes collated by the Office of Experiment Stations in 1899 were not entirely complete, they showed that that year over 2,000 farmers' institutes were held in the United States which were attended by over half a million farmers. The institutes were held in 43 States and Territories. In 19 of these they were in charge of officers of agricultural colleges or experiment stations. In 17 they were under State or county officials, and in 7 they were under the joint control of State officers and college or station officers. Successfully conducted institutes are found under each system of management.

Under different names meetings of farmers in many respects similar

to our farmers' institutes are held in other countries. In some European countries in particular itinerant instruction for farmers is very thoroughly organized.

While in some of our States the farmers' institutes are quite thoroughly organized, have liberal financial support, and reach the farmers quite widely, in many of the States and in the Territories the movement is yet in a comparatively weak condition and the organization and means for this work are inadequate. Moreover, even in the States where the institutes are most thoroughly organized and have had the greatest success, new problems relating to their management have arisen with the growth of the movement. For example, there is increasing difficulty in some States in securing workers thoroughly qualified for this kind of service who can attract large audiences of farmers and hold their attention throughout the meetings.

It is a common experience that after the institutes have been held for a number of years in a given locality the farmers are not so ready to listen to local speakers or those who have nothing to give them except what has come within the range of their own limited personal experience. They demand that the institute workers shall have a wide range of knowledge regarding the science and practice of agriculture, and particularly up-to-date information regarding the progress that is being made throughout the world in studying problems in agriculture both at the experiment stations and on the farm. This has led to a demand on the officers of our agricultural colleges and experiment stations for service at the farmers' institutes far beyond their ability to meet. There is, therefore, need of developing a class of institute workers who shall combine successful practical experience and scientific knowledge of agriculture with the ability to address large audiences of farmers in a way not only to hold their attention but also to impart to them definite information and instruction. Another problem of increasing importance relates to the ways and means of reaching the masses of our farmers through the institutes. On the supposition that 500,000 farmers now annually attend the institutes, it will be seen that out of 10,000,000 farm workers in the United States only 1 in 20 is directly reached by the institutes. These are, without doubt, in the main the most intelligent men in the business, and whatever good they receive from the institutes is disseminated to a considerable extent among their less aggressive and more careless associates. But the institutes should directly reach a far greater proportion of our farmers. To do this various expedients will have to be adopted to adapt the institutes to the needs of the different classes of our agricultural population.

These examples of institute problems have been given to illustrate the fact that this movement has now reached such a stage of its development that the comparatively simple methods hitherto followed

in the organization and maintenance of the institutes are not adequate for an enterprise of such magnitude as this has become. The solution of these problems will require much study, involving a comparison of methods employed in the different States and countries. In its national and international aspects there is, in my judgment, room for much useful work by this Department which may well aid in this as in other movements for the education of our farmers and the improvement of our agriculture. While the Department has already done something toward helping institute movements, I believe that it should be put in a position to organize work in this line more thoroughly, and I have therefore decided to ask Congress to make a special appropriation of $5,000 to enable the Office of Experiment Stations to enlarge its work with a view to giving definite aid and encouragement to the farmers' institutes in the different States and Territories. This may be done by collating and publishing information regarding the institute movement at home and abroad, by furnishing the institute workers with the Department publications and information through correspondence, by advising and assisting the institute managers in different parts of the country with special reference to perfecting organization and strengthening the work in weak places, and in general the Department may act, through its Office of Experiment Stations, as a sort of clearing house for the farmers' institute movement as it has done in the case of the agricultural experiment stations; that is, it would be a center for the focalization and dissemination of information and influences which may serve to develop farmers' institutes and make them a more efficient means for the education of our farmers and the improvement of our agriculture.

I am convinced that the publications of the Department and the experiment stations do not in themselves constitute all-sufficient means for the dissemination of information on agricultural subjects among our people. While the work of the Department and the stations has already been so far disseminated and applied that it has made important changes for the better in our agriculture, the spread of the influence of these institutions is comparatively slow because the means for directly reaching the farmers which they now possess are inadequate. The farmers' institutes may in a great measure supply this lack. When properly organized, they will bring to the masses of our farmers the information which they need to enable them to understand and apply the results of the work of the Department and the stations, and will impress upon them by practical illustrations and demonstrations the benefits which advanced scientific knowledge may confer upon our agriculture. Through the institutes, as in the case of other educational agencies, the living teacher coming in contact with the living worker can produce results which it is hopeless to expect from printed documents, however well written and illustrated.

INVESTIGATIONS ON THE NUTRITION OF MAN.

The investigations on the food and nutrition of man during the past year have included dietary studies and cooking, digestion, and metabolism experiments. They have been conducted in various parts of the United States in cooperation with the experiment stations, agricultural colleges, and universities. Seven technical bulletins, two farmers' bulletins, and a Yearbook article on these investigations have been published during the past year.

The evidences of popular and scientific interest in investigations on the food and diet of man continue to multiply. The results of the investigations of the Department are being incorporated in other investigations and in scientific works on this subject, and the apparatus and methods devised by our investigators are being adopted both at home and abroad. Our publications are being used in unusual extent in connection with the courses of instruction in domestic science in schools of all grades in this and other countries, and are also much sought after by women's organizations interested in the promotion of home economics.

The lines and methods of investigation of the problems of the nutrition of man have now been so far worked out that it seems desirable that some features of this work should be conducted on a larger scale than hitherto, with a view to a more definite application of their results to practical affairs. For example, while a considerable number of dietary studies have been made, these have by no means covered the variety of conditions existing in different parts of this country and among people of different occupations. A more systematic and thorough attempt may well be made to collect reliable data regarding the food habits of our people. We need especially to study the food consumption of our farmers and rural and urban wage-workers in different regions, with special reference to their hygienic and economic requirements. Again, it is believed that the results of nutrition investigations already made may be practically and beneficially applied in a wide way to the feeding of man wherever a considerable number of persons are to be fed on a systematic plan. This applies especially to boarding schools, college clubs, reformatory and penal institutions, and hospitals for the insane and other dependent classes.

A beginning has already been made in this direction, but there is still room for a large amount of investigation before definite suggestions of general application can be made. The importance of this subject may be illustrated by reference to the hospitals for the insane in the State of New York, in which the special agent in charge of our investigations has already made some studies under State auspices. The annual cost of the food supply to these hospitals has been over $1,000,000. The investigations already made show that not only may the total cost be

considerably reduced and large wastes prevented, but that the dietaries of the inmates of these institutions may be much improved by attention to the facts and principles established by nutrition investigations. These preliminary investigations have also shown the need for more accurate inquiries regarding the food requirements of different classes of persons in these institutions. In the State of New York alone not far from 100,000 people of the dependent and delinquent classes are maintained in public institutions at an annual expense of $26,000,000, of which about $6,000,000 is expended for food. This will give some indication of the vast interests at stake in this matter when we take the whole country into account. Certainly here is a field of investigation upon which the Department might well enter, and in which results of great practical value might be expected.

For the extension of nutrition investigations in the two lines above mentioned, namely, (1) dietary studies of farmers and rural and urban wage-workers, and (2) studies with reference to the utilization of the results of nutrition investigations in public institutions, I indorse the recommendation of the Director of the Office of Experiment Stations that $5,000 be added to the present appropriation for the nutrition investigations.

Now that the governmental, commercial, and other interests of our people are so largely concerned with tropical regions, the determination of the food habits and requirements of people living in such regions has become a matter of much importance. The continuance of soldiers, sailors, and civil officers of the United States in such regions would of itself justify the institution of investigations to determine the best dietaries for their use while there. With our rapidly expanding commerce and the going out of considerable numbers of our people to reside in tropical regions, there is additional reason for undertaking such studies. Moreover, we need to study the dietaries of the native populations which have recently come under the control of the United States, with a view to determining the relation of their food habits to their health and industrial efficiency. Such investigations may easily become an important factor in the agriculture, trade, and commerce of these regions, as well as in the formulation of plans for the improvement of the conditions of life among these peoples. I have therefore indorsed the recommendation of the Director of the Office of Experiment Stations that a special appropriation of $5,000 be made to enable this Department to undertake studies of the food supply and consumption of people living in the Tropics.

IRRIGATION INVESTIGATIONS.

The irrigation investigations conducted through the Office of Experiment Stations have been extended during the past year as far as the appropriation of $50,000 would permit. These investigations have

followed two general lines in accordance with the terms of the appropriation act: (1) Studies of irrigation laws and the social and industrial institutions of irrigated agriculture; (2) investigations of the methods by which water is conserved, distributed, and used.

IRRIGATION LAWS.

The significance of the facts disclosed by the study of irrigation laws can be appreciated only by those familiar with Western conditions, which are in striking contrast to those of the East. In the East moisture comes from the clouds; in the West farmers must secure it from other sources. In the East irrigation may supplement rainfall; in the West it must take its place. Not only is the availability of streams for irrigation the measure of settlement, but the character of the social and industrial life of those who depend upon them will be profoundly influenced by the laws and customs which govern the ownership and control of water.

The most impressive fact connected with irrigated agriculture is the dominating influence of streams on the peace and success of cultivators of the soil. The character of the titles to water finally recognized will do more than all other influences combined to determine whether Western farmers are to be tenants or proprietors. This makes it of vital importance that the disposal of the water resources of the West should be hedged about by every safeguard which experience can suggest. Every consideration which justified the General Government in organizing a bureau for surveying, mapping, and disposing of the public lands applies with equal force to the orderly and just establishment of titles to water by public authority, either State or national.

Unfortunately, however, the importance of this was not recognized at the outset, hence the management of the public land has no counterpart in the disposal or division of Western rivers. Whoever desires to acquire public land can learn from official records just what land is open to entry and what has been disposed of. The need of reliable information regarding the amount of water appropriated and the amount still remaining under public control is more urgent, because men can see with their own eyes what lands have been settled upon and improved, but the appearance of a river gives no clue to the ditches which divert it 50 or 100 miles above or the claims which may be filed on its waters below.

Thus far all of the laws governing water rights in irrigation have been passed by the States, and all of the titles to water thus far established are either the creation of State statutes or the results of decisions of State courts. A few States have enacted enlightened codes of water laws. In these the water-right records are a reliable guide to those seeking to irrigate land and a protection to those who have already done so; but there are other States where investors in irriga-

tion works and incoming settlers must depend on what they see or on the statements of other settlers in determining what is their prospect for securing the water supply needed in irrigation. Neither of these sources of information can be relied upon. As a rule, those who have rights to water do not encourage the filing of additional claims and are inclined to say that all the water is appropriated, while newcomers are inclined to believe, if there is any water running in the stream, that it is open to their use. The tendency, therefore, is to build more ditches than the stream will serve, but it is especially marked where conditions for ditch building are favorable. As there are no limitations on the number of claims which may be filed or the number of ditches which may be built, the establishment of new rights goes on until there is not water enough to fill all the ditches, when controversies and conflicts inevitably arise. For such conflicts the only means of settlement thus far provided is a resort to force or the courts. In the States where rights to water are determined by ordinary suits at law, litigation is almost continuous and is exceedingly burdensome. It too often happens that such suits, instead of settling the nature of water ownership, only create new issues, which in turn burden the courts and impoverish water users.

This condition of affairs should not continue. The growing demand for water for irrigation purposes, the greater needs of cities and towns for domestic uses, the importance of streams in the generation of power, are making it absolutely necessary that some simple and final method of determining and protecting rights to streams shall be provided. This Department is lending all the aid its means will permit to bringing this about, and with most encouraging results. No feature of these investigations has met with more appreciative recognition than the study of water-right problems, and the meritorious character of the laws enacted last winter by several arid States and Territories shows that the Department's work is bearing fruit. The importance of these investigations is not to be measured, however, by results already achieved, but by their influence on the future social and industrial life of the West.

The report on irrigation in California recently published by this Department presents an impressive picture of the manner in which development has been hampered by lack of adequate water laws. The chaotic and conflicting records of claims, the uncertain limitations on riparian rights, and the failure to protect all rights by the public division of the water supply in times of drought has been a source of anxiety to the user and of expense and loss to the not less worthy owner of ditches and canals. The marvelous natural advantages of the State have been sufficient to offset these drawbacks, but the larger and better use of water in the future is dependent upon their removal. Especially is this true if the Government is to construct irrigation works.

Under present conditions no one knows who would control the water made available by public funds. No one knows whether the needy user or the speculative holder of a water title would reap the benefits of this expenditure. The report on irrigation in Utah, soon to be published by this Department, shows with equal clearness the need of laws to insure stability and justice in the distribution of the water supply. These reports will be followed by similar investigations in other arid States. They will present the facts. With these before them the people of each State can determine what action, if any, is required.

Reform in irrigation laws will be final and satisfactory only when it comes through the enlightenment of the people most concerned. In a matter so vitally affecting the home as the control of the water supply no legislation will be effective which has not the sanction of the irrigators themselves. As yet, this kind of agriculture is new and its requirements are only imperfectly understood. Material development has outrun the creation of institutions necessary for its protection. The last is the most difficult problem, and it is the one now directly before us. The possibilities of irrigated agriculture are so great that everything which will contribute to its largest and best development is a matter of national interest. We are now in the momentous years when institutions are forming, and the labors of this Department to foster tendencies in the right direction and to correct mistakes before they have become fixed by time and custom should be continued. What is done now affects not only the present generation of irrigators, but will vitally influence those of the distant future.

DISTRIBUTION AND USE OF WATER.

The design and improvement of instruments for measuring the water used in irrigation have received the further attention of the experts employed in this work, and have resulted in registers being furnished to irrigators at about one-half the cost of foreign instruments made for this purpose. Accurate measurement of water tends to promote economy, because it enables farmers to know whether they are receiving what they pay for and canal companies to check wasteful use wherever it occurs.

In addition to improving instruments for measuring the depth of water flowing in canals, a station has been established at Cheyenne, Wyo., for rating current meters and testing water registers. This station has been of marked service to the irrigation interests of the surrounding States.

The studies of the duty of water have been extended so as to embrace all the problems of a river. The results show that the volume of water required to irrigate an acre of land along some parts of a stream will irrigate two or three acres in other places. They also show the need of preliminary study of this subject in order to rightly locate ditches and

canals. The water supply in the same river gains in some places from seepage and loses in other places. An illustration of the change in volume due to this action was shown last season by Snake River, in Idaho. At one place in its course it carried enough water for 200,000 acres of land. Forty miles above it was dry. Nothing had been added to it by surface streams in the intervening distance. Where it was dry the water had sunk into the sand; farther down it reappeared on the surface.

The studies of evaporation and seepage have been extended in order to show more clearly the extent of the losses from canals from these sources. Much interest is being manifested in these investigations by managers of canals. Definite information on the subject is needed by those who are planning new works and to enable the managers of the old ones to distribute their water supply to the best advantage.

The operation of canals which divert streams flowing over sandy beds, or which are heavily charged with silt, has proven a source of great perplexity to those in charge, and the influence of sediment in the maintenance of reservoirs deserves careful consideration in the location of these works. Much valuable information on this subject has been gathered during the past year.

In some of the older irrigated districts the percolation of water from canals, or its wasteful use on fields, has created bogs and marshes on the lower lands. To make these over-watered fields again productive drainage will have to supplement irrigation. The plans for drainage should be made, like those for the original watering, on a comprehensive plan. The individual irrigator can not drain his own farm without the cooperation of his neighbors. Plans for effective cooperation are needed, and the aid of this investigation has been asked in their preparation.

IRRIGATION IN HUMID SECTIONS.

Interest in irrigation in the humid regions of the United States is constantly growing. This has been stimulated throughout the Middle West by the drought of last summer, and in the South and Southwest by the success of the rice industry. In the State of Louisiana more miles of irrigation canals have been built and more money expended on pumping plants during the past two years than in any arid State. The application of irrigation in growing rice in Louisiana and Texas has made land worth originally from $5 to $10 per acre worth $50 to $100 per acre, and promises to enable the United States to become an exporter instead of an importer of this important food product.

A recognition of the increased interest in irrigation in the East has caused this Department to extend its investigations in this part of the country. The experiments being made by Prof. R. C. Waters, of the Agricultural Experiment Station of Columbia, Mo., are attracting

wide attention in that State, while the investigations of Prof. F. H. King, of the Agricultural Experiment Station of Wisconsin, at Madison and Stevens Point, and of Prof. Edward B. Voorhees, of the Agricultural Experiment Station of New Jersey, will serve to show the value of irrigation in securing larger yields and providing an insurance against drought. The indications are that irrigation is to have a wide field of usefulness in many sections where it is not a necessity. Especial attention has been paid during the past year to the subject of rice irrigation, and a comprehensive report dealing with the methods of application, the cost of water, and the value of the product will soon be ready for distribution.

The fact that the United States is destined to become one of the leading irrigated countries of the world makes it especially desirable that the laws which control the ownership of streams and the methods of applying water should represent the best thought and experience of our time. Nothing can be more foolish than to continue to learn experimentally for ourselves what is already known elsewhere. The lessons of southern Europe should be placed before the growing communities of the West through reports of experts familiar with our conditions, and who can thus compare their methods and ours. The first of such investigations, embracing Italy and Egypt, is now being carried on.

In no year since Western settlement began has the prosperity of the irrigated farm been as marked as during the one drawing to a close. The high prices of cattle and sheep have contributed to the profits of the grower of forage crops. There has been a ready market and good prices for all the surplus products of the irrigated farm and garden, and these high prices have been accompanied by an almost uniform record of large yields.

AGRICULTURAL ENGINEERING.

The prosecution of these investigations has led to the study of a number of affiliated subjects, the relation of which to irrigation becomes apparent only with a thorough understanding of the situation. In one way or another the whole subject of agricultural engineering is involved. Especially is this true of the applications of power to farm work. The subject of pumping will serve as an illustration of this relation. In many places pumping furnishes the most economical and readiest means of securing a water supply. Farmers desire to avail themselves of all the experience of others before wasting any money in gathering it for themselves. Hence this Department is called on for information as to the amount of water required for a given acreage, the size of pump needed to furnish it, the cost of pumping for different depths, the kind of power to be applied, whether steam, wind, gas, water power, or electricity, the cost of machinery, the expense

of its operation, and, in general, all the aid this Department can furnish in determining in advance whether or not this kind of irrigation will pay.

The commercial importance of these inquiries can be understood only by those who realize the immense sums of money which in the last two years have been invested in pumping projects to furnish water. In the rice fields of Louisiana alone several hundred thousand dollars have been expended. This work is as yet in its experimental stage, and this Department is doing a very useful service in answering these inquiries. Another illustration of the manner in which the investigations in irrigation are naturally going into a broader field of agricultural engineering is shown in the way studies of the problems in irrigation engineering have to be supplemented by a knowledge of drainage engineering. Questions are also constantly arising regarding systems of water supply and sewerage of farms and the methods of engineering which will best promote the sanitary welfare of our agricultural people. Many inquiries are coming from Eastern States for information regarding the construction of reservoirs and advice about the handling of water in order to prevent the destructive erosion of hillside farms. We are beginning to realize that the wasteful methods of tillage employed during the conquest and settlement of this country must now give place to more scientific methods, which will restore what is lost as well as preserve what remains. In many parts of our country efforts are being made to improve the conditions of rural, as well as city and village life, by beautifying the environment of the home and the community through attention to the artistic laying out of gardens, lawns, large estates, and parks. For the performance of this work in the best manner the services of expert agricultural engineers are required, and already we find here and there engineers who are giving special attention to these subjects. In various other ways the aid of the Department is also being invoked. Without doubt, agricultural engineering is destined to have as useful a place in this country as it already occupies in European countries, and it is time that the Department should occupy this field of research and aid in the development of our agriculture along this line.

NATIONAL AID FOR IRRIGATION.

There is every reason to believe that irrigation will, in the near future, become a subject for legislation by Congress, and there are important reasons why it should have the attention of that body. Hereafter the seekers for homes on the public domain must look for them in that part of the country where cultivated crops can not be grown by the aid of rainfall alone, and where the extent of irrigation is the measure of settlement. It has been the policy of this country in the past to dispose of its public lands on liberal terms, in order that men

of limited means could be enabled to establish themselves thereon. If this policy is to be continued, more favorable conditions for the reclamation of the remaining irrigable public land must be provided. The largest volumes of unappropriated water now existing are to be found in the great rivers of the West, of which the Missouri, the Colorado, and their more important tributaries are the notable examples. To make these streams available, costly and enduring dams and long and expensive main canals must be provided. If the outlay for these is to be added to the expenditure which each settler must make in building his lateral ditches, putting his land in condition for cultivation, and supporting himself and family during the period of this preparatory labor, the expenditure will be prohibitive for all except men of considerable means. Because of this, agricultural development in the West has for several years been slow, and the period of rapid progress has probably passed, even under the most favorable conditions which can be provided.

The desire of the West is not solely, however, for a more rapid agricultural growth, but a more satisfactory one. The uncertain character of water rights has already been referred to. It is the belief of those best informed that this can be remedied only by a larger measure of public control and the making of certain classes of irrigation structures permanently public works. Among the irrigation works which belong to this class are diverting dams of such size and importance as to influence the safety of all who live below them, the main trunk canals of too great magnitude and cost for private enterprise, and reservoirs built in the channels of streams used for irrigation. The argument in favor of making such reservoirs public works is that they should not be owned by private parties, because the distribution of water from them, in connection with the ordinary flow of streams, creates complications which should be averted. As their chief utility is to make possible a larger and better use of the water supply by storing the floods and supplementing the streams during the periods of drought, the same argument which justifies the setting aside of forest reserves and the payment of salaries of men to patrol them applies to the construction of reservoirs by Congress. The purpose in each case is to conserve and render available the water resources of the West.

The appropriation of money by Congress to construct any of these classes of irrigation works will bring this country face to face with a new governmental policy. Thus far we have left the diversion of streams to private ownership. The construction of public works with either State or national funds means practically a reversal of this policy and carries with it a larger measure of public control over the water resources of the West than has hitherto been practiced or sanctioned by public sentiment.

Congress, in dealing with this matter, will have to consider the man-

ner in which aid can be most effectively extended, as well as to determine the amount of such aid. It must be borne in mind that we are not at the beginning of irrigation development. Over two hundred millions of private capital has already been invested in the construction of irrigation works. The rights to streams already acquired represent many additional millions. The methods and customs by which these properties are operated and rights to streams established are the result of an evolution local in character; hence they differ widely in the different States. An illustration of the situation which prevails is furnished by the South Platte River and its tributaries in Colorado. There are over a thousand separate and distinct rights to the water of this stream. Some of these rights serve to irrigate over a hundred farms. The water right of one canal provides for the irrigation of over four hundred farms. Practically all of these thousand appropriations have reference to a common supply. Each right has a different rank, and the division, extending over thousands of miles of the main stream and its tributaries, must be carried out with reference to relative priorities. Such a division is a complex and difficult problem. It has required nearly half a century for the people of this section to solve it and devise a working system, but as a result of their experience each irrigator has come to understand his own rights and those of his neighbor, and has learned what to expect when the stream is low and what he can rely upon when it is high.

It is a question whether any appropriations which Congress might make for the construction of additional works in this district would not inflict more injury than benefit if such construction carried with it any disturbance or interference with the existing system, which people understand and to which they are attached.

The water laws of Colorado differ from those of other States. In Utah rights are established in a different manner and are of a different character, and these rights are enforced by a different body of officials. There are still other differences in Wyoming, and much more striking differences in California. This does not mean that any of these systems are entirely satisfactory. All would be improved by modification, but the change from present conditions should be made only when the people whose interests are at stake are ready for it.

The passage by Congress of any law giving the General Government control over irrigation in the West would mean, first of all, the employment of a large number of new officials and the formulation of an administrative policy to take the place of those now existing in the States. It would impose upon national officers the duty of determining what claims to water should be recognized and those which should be disregarded. As State laws differ from each other, any plan which Congress might adopt would have to be revolutionary in some States. If it were certain that the National Legislature would devise a

just and effective system which would operate everywhere alike, the unsettling of existing conditions might not be so objectionable, but there is no such assurance. All who have studied the subject agree that, notwithstanding the imperfections of State laws, it would be a mistake to attempt reforms by an arbitrary exercise of power from without, but that the true solution is to educate irrigators as to their highest interests.

If the States are to control the water supplies, there should be satisfactory assurance that whatever is made available by public funds shall benefit the actual users of water and not enrich the holders of speculative rights. In some States there is such assurance. These States are entitled to national aid, because it is known from present conditions that such aid would be clearly beneficial. But there are other arid States where the doctrine of riparian rights jeopardizes the success of every irrigation work now built, as well as any works which the Government might build. In other States rights have been established to many times the existing supply, yet there is nothing to prevent new claims being filed, new diversions made, and unending litigation over the conflicts thus created. For the Government to provide an additional supply on these streams before existing controversies are settled would simply aggravate and intensify the evils of the present situation. Whatever aid Congress extends should be conditioned on the enactment of proper irrigation codes by the States, and be made to promote the greater efficiency and success of such laws rather than interfere with their operation.

INFLUENCE OF LAND LAWS ON IRRIGATION DEVELOPMENT.

The irrigation problem of the arid West is not, however, one of water alone, but of land and water. The character of the laws which control the disposal of the 500,000,000 acres of arid public land can not but have a vital influence on the rapidity and success with which irrigated agriculture is extended. The management of these lands is a great economic trust of the nation and affords one of the highest tests of the capacity of the Republic to deal with problems of this character.

There are several directions in which land legislation can be made to promote agricultural development. Laws to protect investments of private capital in irrigation works are urgently needed. Many of the losses experienced in the past by the builders of large canals have been due to misfit land laws. The reasons for this are well understood in the West, but apparently not realized elsewhere. One has been the injury wrought by speculative filings on the land to be irrigated. The building of a canal enhances the value of the land it covers from that of grazing land to that of farming land. With a few exceptions this increase in value is at least tenfold. Under former public land laws it was possible to make filings without any outlay

except land-office fees or without making any substantial improvements, hence every canal survey has been the signal for a rush to the land office to file on the country to be watered. A majority of those making these filings were not actual settlers, but speculators seeking to make money by selling out their claims to the ditch company, or later to those who actually wished to farm the lands.

While all the land laws were doubtless intended to benefit settlers, they have in practice, in the arid region, too often benefited speculators. Hundreds of filings made under the desert, preemption, homestead, and timber-culture acts have been made by people who never were farmers and never expected to become farmers. It is to such filings that scores of meritorious irrigation enterprises owe their failure. The repeal of the preemption and timber-culture acts, and cutting down desert land entries from 640 to 320 acres, has improved the situation, but it can be still further improved by an entire repeal of the desert-land act and by requiring settlers on homesteads to cultivate as well as to live on their farms. The desert act was an economic mistake. Six hundred and forty acres is more arable land than a man of moderate means can cultivate under irrigation.

GRAZING LAND.

Surrounding the irrigable valleys are vast areas of grazing land which can never be cultivated because of lack of water, or because the surface is too broken for irrigation. Although a single acre produces little forage, the aggregate value of the pasturage is very great, and large sums of money and many men are employed in the range stock industries. Probably 400,000,000 acres of the public domain has no agricultural value except for pasturage. At present it is an open common with no laws for its protection or its disposal.

The question to be considered is whether this lack of the control of the grazing lands is an injury or an aid to the irrigation development. That it must exert an important influence can scarcely be doubted.

In sections remote from railways or local markets the prohibitive cost of transportation renders the growing of farm products for sale unprofitable. These products must be consumed where raised, and the only product that can be so consumed is winter feed for stock, and this in turn requires stock to consume it. Many irrigable areas are 50 or 100 miles from a railroad station. The use of grazing lands is as essential to successful irrigation of these areas as control of a water supply, but so long as there is no law giving secure tenure on grazing land the farmer under irrigation is subject to the danger of having his home pasturage eaten up by some nomadic flock or herd. This frequently occurs, and the gravity of the conflicts it provokes is serious. During the summer months not a week passes which does not witness an armed encounter either between settlers and range stockmen or

among the range stockmen contending for the control of the same grazing area. If, instead of this uncertain and uneconomic system, there could be a law for the control of the grazing land which would unite with a small homestead of irrigated land a larger but limited area of grazing land, thus enabling each farmer to raise his winter feed supply on his irrigated land while keeping his stock on the grazing lands in summer, the value of irrigation works would be much enhanced and a great incentive given to development by private capital.

The purpose of such union of the irrigable and grazing lands would be to divide the grazing land into a multitude of small holdings and thus increase the number of people benefited by it; to give security of tenure, which will make the growing of live stock attractive to many who are now repelled by the risks and controversies of the open range; to give increased value to irrigation, and provide the conditions indispensable to success in many localities. Such a land system would also encourage the introduction of improved breeds of stock, because it would afford better opportunities to care for them. At present there is little inducement to such improvement, because of lack of control over the country occupied. It would enlist self-interest in the improvement, or at least the preservation, of the native grasses, where every influence now tends toward their destruction.

Such a union of the irrigable and grazing lands would cause the building of fences and the making of other improvements far beyond the limits of irrigation. It would attach settlers to the pastured areas as closely as they are now wedded to their irrigated fields. It seems to possess many advantages over the present system, or lack of system, if a satisfactory law can be enacted bringing it into operation. Whatever is done, no obstacle should be placed in the way of homestead settlement, but this does not seem to offer any special difficulties. In the first place, the grazing area should be leased and not sold. The possibilities of its utilization have not yet been determined, nor is enough known to fix definitely the limits of a grazing homestead. The leasing of the grazing land in such a way as not to interfere with the homesteader can be accomplished in one of two ways: Public lands can be classified and the boundaries of irrigation and grazing defined, or the grazing land can be leased subject to entry under the public land laws. Even under such restrictions it is believed that the greater part of the grazing lands can be leased, and the rentals therefrom would amount in the aggregate to a very large sum. This could appropriately be applied to the reclamation of the irrigable lands. It would be taking nothing from the revenues of the nation, because it would come from the better use of a resource which now produces nothing.

There are also many things to commend the expenditure of the revenues derived from the sale of public lands to the construction

of irrigation works. Such an expenditure will enhance the value of the remaining lands, open up larger areas to settlement, and add to the material wealth of the country in a much larger measure than will the retention of these lands by the Government in their present condition.

The leasing value of the grazing lands has been demonstrated in a number of arid States. When Montana, Wyoming, Washington, and Idaho were admitted to the Union, a condition was attached to the donation of State lands which prevented their sale for less than $10 an acre. This was a prohibitive price, as the adjoining areas of public land could be acquired for nothing under the homestead act. Hence the only way a revenue could be derived was through their rental. As the greater part of these lands is comprised in sections 16 and 36 and only represent the value of pasture lands, they afford a fair indication of the rental possibilities of the grazing areas. The following table shows what has been done by several States in this matter, and is a significant indication of what is being lost through lack of management of the public lands of this character:

Summary showing results of leasing State lands in some of the arid States.

State.	Total area of State lands undisposed of.	Acreage under lease at close of last fiscal year or biennium.	Total rents received.	Average rental per acre.
	Acres.	*Acres.*		
Colorado	2,639,938	1,251,770	$103,121	$0.082
Idaho		32,271	23,050	.614
Montana		995,912	112,467	.112
Nebraska[a]	2,483,372	1,879,143		
Utah		106,531	6,300	.059
Wyoming		1,969,945	80,841	.041

[a] Total receipts for biennium ending November 30, 1900, for interest, rentals, bonus, etc., were $782,975.65.

In addition to these State rentals, the Union Pacific Railway in 1900 rented 428,800 acres in Wyoming and 667,520 acres in Colorado, and the Northern Pacific Railway leased over 1,000,000 acres at rentals varying from 2 to 7 cents per acre.

CONCLUSIONS REACHED.

During the past summer and preceding summers I have given much time to a personal investigation and study of the land and water problems of the West, and have reached the following conclusions regarding them:

(1) That private enterprise will have to be supplemented by public aid in the construction of certain classes of irrigation works if we are to secure the largest development of Western agriculture.

(2) That reservoirs located in the channels of running streams should be public works.

(3) That the first step toward national aid for irrigation should be the passage of enlightened codes of water laws by the States to be benefited.

(4) That the land laws should be modified by repealing the Desert Act and by requiring cultivation as well as residence on a homestead.

(5) That the nonirrigable grazing lands should be leased in small tracts so as to unite the irrigable and the pasture lands.

DIVISION OF ENTOMOLOGY.

The principal work accomplished by the Division of Entomology during the fiscal year ended June 30, 1901, is as follows:

ESTABLISHMENT OF SMYRNA FIG GROWING.

The investigations which resulted in the introduction and establishment in California of the fig-fertilizing insect (*Blastophaga grossorum*) were practically completed. An assistant was sent to Fresno in 1900, remaining there throughout the season, making observations which completed the life history of the insect and resulted in the ascertaining of important facts previously unknown, although in southern Europe the insect had been known and studied for very many years. He also took active part in the practical work of handling the insect and fertilizing the crop. Eleven tons of Smyrna figs were raised, dried, and placed on the market, and tests made by chemists and fruit experts show these figs to be superior to the imported product. The insects were successfully carried through the winter of 1900-1901, many of them hibernating successfully without cover; and, although not coming under the head of the fiscal year in question, it may be interesting to add that in the autumn of 1901 the crop of Smyrna figs was so abundant as to be difficult to estimate. Certainly more than 50 tons were gathered, and the full crop may possibly have reached as high as 75 tons. The fertilizing insect has been thoroughly established at several other points than Fresno, and the Division of Entomology now holds itself in readiness to see that a supply of the fig insects is furnished to any fig grower after he has succeeded in raising to the bearing stage caprifig trees and Smyrna fig trees.

WORK AGAINST THE SAN JOSE SCALE.

Several predatory insects have been imported from different foreign countries, and good results to American agriculture are expected. The most important of these will doubtless prove to be an enemy of the San Jose scale, which has been brought over from China.

Ever since the appearance of the San Jose scale in the United States the question of its original home has been a mooted one; and, since none of the parasitic and predatory insects of this country seem to be very efficient in destroying this scale, it has become an important point to decide, if possible, the question of the original home of the destructive insect, since it is quite fair to suppose that if efficient parasites are to be found they will be found in the original home of the scale. The importance of this quest can hardly be overestimated, since the damage which the San Jose scale has done to the fruit-growing interests of the country, especially of the Eastern States, is almost beyond estimate.

The evidence accumulating during the past two or three years had seemed to show that very possibly this scale was originally imported into this country from Japan, and in the spring of the present year the assistant entomologist, Mr. Marlatt, was sent to Japan for the purpose of studying the question on the ground. Unexpectedly to most entomologists, although not to the entomological force of the Department of Agriculture, it was quite definitely ascertained that the San Jose scale is not indigenous to Japan, but that, quite to the contrary, it was introduced into that country from the United States upon fruit stock at several different times and at several different points. The most careful search failed to reveal the scale in portions of Japan where American plants had not been introduced. Mr. Marlatt's travels in the Japanese Empire lasted about five months, and having satisfied himself, as just stated, he proceeded to China, visiting Chefoo, the port of the great foreign fruit district of North China, where the industry was started by a missionary (Dr. Nevins) some thirty years ago, since which time it has extended over the province. Foreign fruits were introduced and are now grown alongside the native fruits or grafted on native trunks. The San Jose scale was found there, but the admixture of foreign trees with the native trees prevented any conclusion as to whether the scale was indigenous or not. Proceeding to Pekin, he found the fruit markets enormously stocked and representing exclusively the products of the surrounding country and districts south of and adjacent to the Great Wall. All the fruits were native. The apples were small, and the pears were hard and woody. Nearly all this fruit was infested by the San Jose scale.

At Tientsin the same conditions were found in the fruit markets, and in the city gardens and private yards the San Jose scale was found on a flowering shrub coming from North China. In all the region between Tientsin and Pekin and the Chinese wall native fruits only are grown, and no foreign stock of any kind has ever been introduced. Apples, pears, peaches, apricots, and plums are extensively grown on the sunny slopes of all the hills south of the Great Wall. The San

Jose scale in this district could not have come from any foreign country, as there have been no importations and the fruits are all of native sorts. The scale occurs very scatteringly, although generally, just as it should if native, and is in a state of balance with its native natural enemies. It has a natural enemy, everywhere present and efficient, in a ladybird beetle known as *Chilocorus similis*. From this evidence Mr. Marlatt concludes without doubt that the San Jose scale is a native of North China. He has collected many specimens of this efficient natural enemy and has forwarded them to Washington. Steps will be taken to establish and acclimatize this important species, and it is hoped that it will prove as efficient against the San Jose scale in this country as it has in its native home. It is not beyond the bounds of probability that this importation will prove to be one of extreme value to the fruit growers of the United States.

BLACK SCALE, PLANT LICE, AND GRASSHOPPERS.

Possibly the next most important of these beneficial insects which have been introduced is a caterpillar enemy of the black scale, which has been brought over in healthy living condition from Italy by the assistance of Prof. Antonio Berlese, of the Royal School of Agricultural Entomology at Portici. The black scale is a serious enemy to olive culture in California. It occurs not only upon the olive but also less abundantly upon citrus trees, upon a shade tree known as the pepper tree, and other plants. It is the greatest drawback to olive culture in this country. The caterpillar in question (*Erastria scitula*) is found in Mediterranean regions, and is probably one of the principal causes of the comparative freedom of olive trees from black scale in that part of the world. The Division of Entomology has for eight years been attempting to bring this insect to the United States in living condition, and success for the first time was reached in November, 1901. This beneficial insect will be established in California with the assistance of the State board of horticulture of that State. It should be stated that the black scale is apparently a native of the general region from which this beneficial insect has been sent.

Another importation which may also prove to be an important one is a ladybird beetle, known as *Coccinella septempunctata*, which has been brought over from Hungary with the assistance of Prof. Charles Sajo. This insect, native to Europe, feeds upon several destructive plant lice which have been accidentally imported into this country from Europe, and upon the larvæ of the destructive asparagus beetles.

A fungous disease of grasshoppers has been imported from South Africa and has been experimentally used in different places in the United States through the summers of 1900–1901. In some localities it appears to have taken hold successfully, but it is too early as yet to predict any general success.

WORK OF LESS IMMEDIATE IMPORTANCE.

The other work may be summarized as follows: Studies of the insects affecting the violet, rose, and other ornamental plants have been completed. Extensive work has been carried on in regard to scale insects and experimental work with remedies has been conducted. The subject of the investigation of insects as carriers of diseases of human beings has been carried on, and much attention has been given to mosquitoes and house flies in this connection.

In cooperation with the Bureau of Soils, some work has been done looking toward the reclamation of brackish marshes which are breeding places of mosquitoes, and the studies of flies have indicated not only the importance of these creatures in the carriage of internal diseases, such as typhoid fever, but have indicated the cheapest and best remedies. Observations on insects affecting forest trees have been carried on during the year, and extended studies have been made of the codling-moth problem in the Northwest and of the Mexican cotton-boll weevil of Texas, information being obtained in both cases which promises practical results of very considerable importance. Extended studies were made during the summer of 1900 of the insects affecting citrus trees and fruits in southern California and a practical article detailing results was published in the Yearbook for that year. Experiments with remedies were conducted that included a series of experiments with washes against the scale insects and with fumigants both against scale insects and in storehouses, granaries, and tobacco establishments. An investigation has been made of a supposed insect damage to the cocoa-palm industry in Cuba. In apiculture comparative tests have been made of different races of bees and of methods employed in rearing queen bees.

WORK OF 1902.

Work for the fiscal year 1902 is already well under way. The investigation of the codling moth in the Northwest, as authorized by Congress, and of the Mexican cotton-boll weevil in Texas, also authorized by Congress, will be carried on through the whole year. The South African grasshopper fungus will receive further severe practical tests. Search for the original home of the San Jose scale will be continued. Advisory work with regard to the extermination of breeding places of mosquitoes will be continued, as well as many minor lines of inquiry.

OFFICE OF PUBLIC ROAD INQUIRIES.

OBJECT OF THE WORK.

In the establishment and maintenance of this Office the object has been to promote the improvement of the public roads throughout the United States. With that end in view, efforts were first directed to

ascertaining the condition of the roads, the state of public opinion in regard to their improvement, the obstacles in the way, and the best means and methods to be employed in securing better highways. Efforts were next directed to furnishing information in order that the people might be educated on this question, and to arousing interest and forming public opinion in order that practical results might be secured. Work along all these general lines has been continued up to the present.

PUBLICATIONS.

For several years after this Office was created its principal work consisted in collecting, publishing, and distributing information. This was embodied in a series of bulletins and circulars covering almost every phase of the road question. Of these publications hundreds of thousands of copies have been distributed. Some of them have been reprinted several times, and nearly all of them are still available for distribution.

The literary branch of the work of the Office is still receiving careful attention, but it is no longer the principal line of work, greater attention now being devoted to educational work of a more concrete and extremely practical character.

OBJECT-LESSON ROADS.

For spreading information and arousing interest, there is nothing equal to the practical object lesson. The Office of Public Road Inquiries has been trying to show the people the best in the good-roads line.

During the past year "object-lesson" or "sample" roads have been built in nine States. While these have not been built at the expense of the Government, nor on the initiative of the Office of Public Road Inquiries, they are the fruits of its efforts. The Office simply accepts invitations from organizations and communities to give cooperation and technical advice in the making of these sample roads.

Work of this kind produces excellent results. The demand for its extension is far greater than the Office, with its present force and means, can meet.

In the building of sample roads heretofore the machines have been loaned by manufacturers, and the railroad companies have carried them free of charge. The local community has furnished the labor and material, and the Office of Public Road Inquiries has given expert advice and supervision. The Government could, at comparatively small expense, purchase the machinery necessary for continuing and extending this work, and it seems appropriate that it should do so, thus putting this very important branch of the work on a firmer foundation.

ROAD MATERIAL LABORATORY.

The laboratory for testing the chemical and physical properties of road materials, operated with the collaboration of the Bureau of Chemistry, has been in successful operation during the year. By determining in advance the character and suitability of the material to be used in a road, this laboratory saves taxpayers the loss and discouragement resulting from mistakes in selecting materials. This work is important and practical. It will be continued and if possible enlarged.

OTHER PRACTICAL WORK.

The dividing of the United States into four divisions, with a special agent appointed for work in each, has proved advantageous. The work done by these special agents consists principally in the study of conditions, the delivery of lectures, correspondence, and preparation of matter for publication. In the Eastern Division no field work has been done because the special agent assigned to that work was placed in charge of the road-material laboratory. In the other divisions—Middle, Western, and Southern—much better results might have been secured if the Department could have kept these special agents employed all the time. This was impossible owing to the inadequateness of the sum—only $1,500 for each division—available for the payment of all expenses.

A great amount of valuable field work has been done by the Director and his assistants during the year. They have traveled thousands of miles, attended conventions, delivered lectures, and directed the building of sample roads. Their work has reached into 23 States.

The work of this Office is of great and growing importance. Popular appreciation of its efforts has greatly increased, as shown by press comments and resolutions adopted by many popular gatherings. The demand for the services of the Director and his assistants far exceeds the limits of their time and energy. There is an unmistakable popular demand that the Office of Public Road Inquiries be given a largely increased appropriation, a demand with which I am in hearty sympathy. If a larger sum should be appropriated for this purpose I believe it would be profitably expended in carrying on and extending the work of this Office.

DIVISION OF PUBLICATIONS.

In the performance of its duty to diffuse the information acquired through its several Bureaus, Divisions, and Offices the Department depends mainly upon the issue and distribution of publications. The work of the Division of Publications affords, therefore, a fair reflex of the activity and intelligence characterizing the investigating

branches of the Department, and for this reason it is important to observe that the extent of the work devolving upon it is dependent entirely upon agencies outside of the Division and beyond the control of its chief.

It is obvious, therefore, that every step taken in the development and extension of the work of the Department increases the work of the Division of Publications, and yet it must be admitted that the provisions made for the publication work and the distribution of the Department publications have never been fully adequate to the task imposed upon it. The result has been, unfortunately, that every year important reports have been withheld from publication, either until a new fiscal year has brought with it new appropriations, or until a resolution could be passed by Congress specially authorizing their publication and assuming the cost thereof. It is of the highest importance that our publications should be timely and that the practical results of investigations made—all useful information, in fact, acquired by the Department—should be promptly given to the public. These delays are not infrequently costly and are at all times vexatious. Again, in the matter of distribution, the distributing force, largely underpaid as it is, is frequently disorganized and demoralized by suspensions and furloughs necessitated by want of funds, to say nothing of grievous hardship thus imposed upon many hard-working and faithful employees. Not less than 35 persons suffered in this way last year, in spite of the fact that $5,500 of this year's appropriation was made immediately available, and it has become necessary again this year not only to ask for a very considerable increase in the force but to have a considerable sum again made immediately available in order to carry on the work efficiently to the close of the present fiscal year.

GROWTH OF THE PUBLICATION WORK.

In spite of the restrictions thus imposed upon the work of publication, it has nevertheless grown wonderfully during the past ten years. In 1893 there were issued from the Department 210 publications, aggregating over 2,500,000 copies. In the year under consideration, 1901, there were issued 606 publications, aggregating nearly 8,000,000 copies.

FARMERS' BULLETINS.

Of the above publications 3,345,000 copies were Farmers' Bulletins, of which 2,200,000, in round numbers, were distributed under Congressional orders. The total number of Congressional quotas drawn was 413. With the accumulated copies due to quotas undrawn and the increased appropriation for the Farmers' Bulletins the quota for each Senator, Representative, and Delegate for the current year has been fixed at 15,000 copies. Under the present law four-fifths

instead of two-thirds of all copies printed are available for Congressional use, and to satisfy both the Congressional and the Departmental requirements will necessitate an issue of Farmers' Bulletins aggregating a number of copies almost equal to the entire output of all publications of the past year. It has been necessary, to meet this greatly increased demand on our resources, to lease a building in the vicinity of the Department to be exclusively devoted to the storage and shipment of Farmers' Bulletins. This makes the fourth building occupied, in whole or in part, by the Division of Publications.

RELATIVE COST OF EDITORIAL WORK.

It is proper to call attention to the fact that in proportion to the total output of publications and the amount expended for actual printing, the expenses of editing, illustrating, and distributing the publications, and of the clerical work involved in the disposal of the immense mass of correspondence devolving upon this Division, as the result of the nearly 300,000 applications for publications received during the year, amount to very much less proportionately than was the case ten years ago. In fact, at no time since the Division was organized has the cost of editing, illustrating, distributing, and of the clerical work been so small in proportion to the actual cost of printing and the number of publications distributed.

THE YEARBOOK.

The Yearbook of the Department continues to be in great demand. It is difficult to keep it within the limits of a convenient book, owing to the immense variety of subjects covered by the work of the Department which should be represented in it; also owing to the mass of important information, statistical and otherwise, which finds a place in the Appendix, and which, as far as I know, is not available elsewhere. Under these circumstances the propriety of issuing the Yearbook in two volumes, the first to consist of independent articles contributed by the various bureaus, divisions and offices, and the second of the Appendix, presents itself as worthy of consideration.

The Department is subjected to great inconvenience by the smallness of the number of copies of the Yearbook placed at the disposal of the Secretary, and a more liberal allowance is urgently needed to supply the demands for this publication. When the total number of copies of the Yearbook issued was but 300,000, and when the work of the Department was not one-fourth of what it now is, 30,000 copies were allowed the head of the Department, then Commissioner of Agriculture. To-day, with 500,000 copies issued yearly, the same number, 30,000 copies, is placed at the disposal of the Secretary. Fifty thousand copies, at least, are required for the needs of the Department.

SALE OF DEPARTMENT PUBLICATIONS.

Through the courtesy of the Superintendent of Documents of the Office of the Public Printer I am able to present a report of the sale of Government publications, which shows a very large and increasing demand for the publications of this Department, even when the same have to be paid for. This fact suggests the possible—I might almost say probable—solution of the great difficulty which now attends our efforts to achieve an effectual and equitable distribution of our publications. The following table shows the number of Government publications sold and the amounts received therefor during the past four years:

Number of publications sold and amount received.

Department.	Publications sold.				Amount received.			
	1901.	1900.	1899.	1898.	1901.	1900.	1899.	1898.
Department of Agriculture	24,127	16,905	18,750	17,740	$3,220.25	$2,157.65	$2,154.45	$2,089.15
All other Departments	9,458	10,928	8,058	3,623	6,862.44	6,744.56	5,401.66	2,448.12
Total	33,585	27,903	26,808	21,363	10,082.69	8,902.21	7,556.11	4,537.27

IMPROVEMENT OF ILLUSTRATIONS.

In the enforced economy in our publication work, owing to the limited funds at our disposal, the work of illustration has unduly suffered. It has been treated more as a nonessential in a publication, however desirable it might be. In connection with the work of this Department, illustrations, though not always essential, are in many cases, when properly conceived and executed, extremely useful. The rule laid down in this branch of the work is to exclude merely ornamental pictures, and to confine illustrations to such as are desirable and calculated to facilitate the reader's apprehension of the text. It is also of the first importance that such illustrations should be the best of their kind. It has not been possible for the last two years to fulfill either of these conditions, and I have deemed it desirable to include in the appropriations for next year a special sum sufficient to pay the necessary force of artists and draftsmen, and to provide for a certain amount of illustration work over and above what we can afford to include in the regular printing fund.

NEED OF ENLARGED QUARTERS.

The urgent need of a new building is nowhere more forcibly exemplified than in the objectionable conditions under which it is necessary to carry on the work of this Division. Crowded and inadequate quarters assigned to the Division here and there—some on the main floor and some in the attic of the main building, others in widely separated

and for the most part unsuitable buildings—grievously hamper the work of the 140 persons necessarily employed in the editing, illustrating, and distributing of publications, and in the correspondence and clerical work entailed thereby.

SECTION OF FOREIGN MARKETS.

Agriculture contributed conspicuously to the remarkable expansion of American commerce witnessed during the past year. According to statistics prepared by the Section of Foreign Markets, the highest record previously attained in the exportation of agricultural products from the United States, that for 1898, was surpassed by more than $90,000,000 in the fiscal year ended June 30, 1901, when a value of over $950,000,000 was reached. Fully 65 per cent of the domestic merchandise sent abroad during the year originated on the farm.

EUROPEAN MARKETS.

Among our foreign customers in agricultural products the United Kingdom stands preeminent, taking over 50 per cent of our exports. Recent investigations by this Section into the possibility of still further increasing our trade in the British market brought out the significant fact that during the calendar year 1900 our agricultural exports to the United Kingdom, large as they were, comprised only 33 per cent of the foreign farm produce purchased by that country, leaving two-thirds of such produce to be supplied by our competitors.

In view of this fact, the desirability of procuring exact information as to the character of the agricultural imports received by the United Kingdom from countries other than the United States was apparent. The Section has accordingly begun the preparation of a comprehensive report on the subject. It will be the special object of this report to suggest such opportunities as exist for extending our trade in the British market in competition with other countries that are now conducting a lucrative business there.

After the United Kingdom the most important foreign markets for our surplus farm products are afforded by Germany, France, the Netherlands, and Belgium. During 1901, Germany received 15 per cent of our exports, and France, the Netherlands, and Belgium together about the same amount. Each of these countries like the United Kingdom is at present importing extensively from other sources. They therefore offer similar opportunities for more active competition on the part of the United States. Reports on the agricultural imports of these countries have also been planned.

TRADE WITH DEPENDENCIES.

Special statistics have been compiled by the Section relative to our trade in farm products with the new insular dependencies, except

Hawaii, for which no separate returns are now made. Our agricultural exports to Cuba, Porto Rico, and the Philippine Islands in 1901 were valued at $18,600,000, comprising about 53 per cent of the domestic merchandise sent to those destinations. Compared with the trade for 1900, amounting to $17,551,000, the returns for 1901 exhibit a slight increase, gains in the exports to Porto Rico and the Philippines more than counterbalancing a considerable decline in the exports to Cuba.

As regards our agricultural imports from the three dependencies under consideration—Cuba, Porto Rico, and the Philippines—there was a decided increase, the value for 1901 amounting to $48,600,000, as compared with only $36,162,000 for 1900. The bulk of the gain occurred in the imports from Cuba, but there was also a noticeable increase in the case of Porto Rico. The imports from the Philippines showed a decline.

TRADE OF PACIFIC PORTS.

During the year the Chief of the Section of Foreign Markets was detailed to accompany the Congressional Committee on Rivers and Harbors upon its tour of inspection to the ports and waterways of the Pacific coast. The trip afforded an excellent opportunity to study the growing export trade that is being conducted through our Pacific ports, and much valuable statistical information was gathered on the subject. Of the $70,000,000 worth of domestic merchandise exported from the Pacific coast during the fiscal year 1900, $45,000,000 worth, or considerably more than half, consisted of farm produce. Indications point to a still further increase during the immediate future, the opening of new markets in the Orient and the rapid development of the wonderful agricultural resources of the Pacific coast region combining to render this branch of our commerce one of the most promising.

LIBRARY.

ACCESSIONS TO THE LIBRARY.

During the past year the accessions to the Library have numbered over 4,000 books and pamphlets. These accessions included many reference books of especial value in the work of the Department and a large number of scientific periodicals. The latter class of publications, obtained by purchase and by exchange, forms the most considerable, as well as the most valuable, part of the annual accessions.

CATALOGUE.

In addition to the regular work on the general card catalogue, a "Catalogue of periodicals and other serial publications" contained in

the Department Library has been completed and will be issued at an early date. Two reference lists, one containing references to publications on irrigation and land drainage and the other on tobacco, have been prepared, but a lack of funds for printing delays their publication as Library bulletins. It is to be regretted that the printing appropriation has not been sufficient also to provide for an increased number of issues of the card index to the Department publications. This index has increased the usefulness of these documents many fold.

DEMANDS UPON THE LIBRARY.

The constantly broadening fields of investigation being entered upon by the Department increase greatly the demands upon the Library. These investigations depend largely upon the extent of the Library's resources and their availability. To further these conditions adequate appropriations are needed, both for books and for their care and preservation. The amount of reference work done in the Library has increased so much during the past year that an assistant for this special work is much needed.

ASSISTANCE TO AGRICULTURAL COLLEGES AND EXPERIMENT STATIONS.

In not a few cases college and station workers have drawn upon the resources of the Library to assist in some special work. Whenever it can be done without interference with the work of the Department, the usefulness of this large collection of books and pamphlets, many of which are not to be found elsewhere in this country, should be thus extended. This Library may justly claim to be the headquarters for agricultural literature, and as such should be able and ready to meet the demands from without as well as from within the Department. The requests which come from colleges and station libraries for suggestions as to the best arrangement of their material and as to other details of administration should be met with a ready response.

NEED OF MORE SUITABLE ACCOMMODATIONS.

The present Library room is entirely inadequate for the accommodation of readers and for the work of the Library staff. Much space is occupied for other than library purposes on account of the generally crowded condition of the Department offices. In addition to the necessity for more commodious accommodations for the present collection of over 70,000 books and pamphlets, there is the still greater need of a safer building than the one in which the Library now is. The destruction of any considerable part of this valuable collection of books would be an inestimable loss to the Department in particular and to scientists at large.

DIVISION OF ACCOUNTS AND DISBURSEMENTS.

Congress appropriated $3,303,500 for the United States Department of Agriculture for the fiscal year ended June 30, 1901, being an increase of $558,920 over the appropriation for the preceding year. When all accounts shall have been finally settled the payments will amount to about $3,220,000.

The regular appropriation of $15,000 for each of the 48 agricultural experiment stations in the several States was also made.

On June 30, 1901, the unexpended balances of the appropriations for the year 1899, amounting to $28,899.27, were covered into the Treasury.

During the year $6,340 was paid for rental of leased buildings in Washington. Owing to inadequate accommodations Congress, at its last session, provided for the lease of additional buildings, and the rental for the fiscal year 1902 will exceed $10,000.

BIOLOGICAL SURVEY.

The Biological Survey is engaged in mapping the boundaries of the natural crop belts of the country and aims to furnish the American farmer with lists of agricultural products which, so far as climatic conditions go, are likely to be a commercial success in different parts of the country. This work is based on the theory, the correctness of which is believed to have been established by the Biological Survey, that the boundaries set by nature to areas inhabited by particular kinds of native animals and plants are likewise the boundaries of areas in which particular agricultural crops may be most successfully cultivated.

LIFE ZONES AND CROP BELTS IN TEXAS AND CALIFORNIA.

During the past season the work of mapping the life zones and crop belts in the West has been continued, particularly in Texas and California. In Texas the boundaries of the several belts have been in the main determined, and it has been ascertained that over a large part of the arid lower Sonoran zone a fiber plant, a species of agave closely related to the Mexican istle or "Tampico hemp," grows in great abundance, covering an area about 20,000 square miles in extent. In view of the enormous quantity of fiber of other species of agave annually imported into the United States, mainly from Mexico, amounting in 1900 to 82,669 tons, worth $12,257,353, the Texas species is likely to prove of considerable commercial value.

In locating the boundaries of the zones in California many interesting facts have been brought to light. In this State, owing to the trend of the mountains and the influence of the coast fogs, the zones run in the

main north and south instead of east and west; and, except in the coast region and the northern part of the State, all but one are pushed up into the mountains. The valleys of the coast ranges, in retreating from the sea toward the interior, receive less and less fog and more and more heat and sunshine, affording in their individual climatic peculiarities conditions favorable for the growth of widely different agricultural and horticultural crops. Thus, while some are cool enough for apples, cherries, and the sugar beet, others are warm enough for almonds, citrus fruits, and raisin grapes. The hottest parts of the State, as well known, lie in the deserts east of the mountains, where, through the instrumentality of this Department, the date palm seems destined to become an important and profitable crop.

DESTRUCTION OF PRAIRIE DOGS.

On our great plains, which stretch from Montana and the Dakotas southward far into Texas, one of the chief enemies to agriculture and stock raising is a large ground squirrel known as the prairie dog. This animal appears to be increasing rapidly, owing to the destruction of its natural enemies, chiefly coyotes, badgers, ferrets, hawks, owls, and eagles. It is destructive not only to grain, alfalfa, and other cultivated crops, but also to the native bunch grass; and ranchmen complain that on certain grazing lands over which its colonies have spread during the past few years its mounds are so numerous and its consumption of herbage is so great that only half as many cattle can be pastured as formerly. In response to persistent complaints and urgent requests for remedies, the Biological Survey has prepared and distributed a circular of directions for the destruction of prairie dogs, and is now conducting field experiments in the Dakotas, Nebraska, Kansas, and Texas with a view to the discovery of remedial measures cheap enough for general use on the ranch lands of the plains.

SOME USEFUL AND NOXIOUS BIRDS.

In southern California it has been discovered that two species of birds, the Bullock oriole and the California least tit, feed extensively on the destructive olive scale, an insect injurious to both olive and orange trees, and that the common Western goldfinch feeds on green plant lice. On the other hand, some birds, particularly the house finch or "linnet," are bitterly complained of as enemies of the fruit grower. The relations of birds to fruit culture in California are so important that the assistant in charge of this subject was sent to the principal fruit-growing areas of the State, where important investigations were made, the results of which are now being prepared for publication.

In Texas it has been found that the large blackbirds, locally known

as "jackdaws," which have been slaughtered in great numbers for the millinery trade, are particularly valuable in the rice fields and cabbage growing districts, feeding extensively on the crayfish, which cut the rice, and on the destructive cabbage worm. In other investigations of the food habits of birds special attention has been given the thrushes, titmice, sparrows, orioles, woodpeckers, flycatchers, and swallows. The growing interest in economic ornithology is shown by the rapidly increasing demand for literature on this subject, to partly meet which a number of bulletins on food habits of birds have been published and distributed. The edition of one of these, entitled "Some common birds in relation to agriculture," has already reached 220,000 copies.

WORK UNDER THE LACEY ACT.

In addition to its other duties the Biological Survey is charged with general supervision of matters relating to game protection and introduction. It publishes bulletins on this subject and on laws governing the transportation and sale of game, digests of State game laws, and so on, and aids in every way possible the preservation of native birds and game. In carrying out the provisions of the Lacey Act the Department has received the active cooperation of three other Executive Departments—Treasury, Interior, and Justice; of several railroad and express companies; and of many State officials and individuals. A system of permits for the importation of foreign wild animals and birds has been successfully put into operation, and provision made for inspection at six of the most important ports of entry. During the year the number of permits issued was 186, covering the entry of about 350 mammals and nearly 10,000 birds. In order to avoid undue annoyance to importers I have extended the list of species which can be imported without permits to include a number of well-known animals intended for exhibition purposes. It is gratifying to state that the law has accomplished its main purpose in preventing the introduction of the mongoose and other injurious species, and has also brought to light several facts of interest. A considerable trade in live pheasants is carried on with Canada; thousands of Chinese quail are imported alive at San Francisco; and cage birds of many species are imported from Germany, China, Japan, Australia, and Mexico. The danger of introducing injurious species is very great, since several thousand birds are frequently imported in a single consignment; protection lies in careful inspection at the port of entry. During the coming year the inspection service will not only be improved but will be extended to Hawaii. Provision should be made for placing this service on a permanent basis and for maintaining it in the most efficient manner.

INTERSTATE COMMERCE IN GAME.

Numerous violations of the law regulating interstate commerce in game have been reported, and in many instances the Department has

been called upon to assist in prosecuting the offenders. Fifty-seven cases have been investigated, of which 27 have been referred for action to the Department of Justice, but whenever possible the evidence has been placed in the hands of State authorities. For the first time in the history of game protection it has been possible to secure convictions in cases involving illegal shipment of game months after the offenses were committed, and with evidence obtained a thousand miles or more from the point of shipment.

NEED OF MORE LIBERAL APPROPRIATION.

Again it seems necessary to call attention to the insufficient appropriation by reason of which the Biological Survey is obliged to carry on its field work in a piecemeal way, doing a little each season and returning the next year to the same region. The work could be done for considerably less money if the survey of a particular area could be completed at one time. A special effort has been made to carry the prairie dog investigation to a successful conclusion, but this requires field work on the Great Plains in the early spring, for which no funds are available. Owing to the same cause the Biological Survey has been forced to decline requests from several States for cooperation in carrying on local biological surveys. Such cooperative surveys would hasten the completion of the zone and crop maps, and would be of material service both to the States interested and to the General Government.

DIVISION OF STATISTICS.

With a smaller appropriation available for its work than was expended for a like purpose in any fiscal year from 1891 to 1898, inclusive, the Division of Statistics has endeavored to meet the ever-growing demand for statistics of the agricultural industry. It handled during the fiscal year nearly 2,500,000 returns from a corps of correspondents numbering about 250,000, the results of its work appearing in 18 separate reports, of which over 1,500,000 copies were printed.

While its work has consisted largely, as heretofore, of the preparation of reports relative to the principal products of the soil, including the extent and geographical distribution of the area of production, the condition and prospects of the crop during the growing season, and the quantity, quality, and disposition of the product harvested, it has also included reports on other branches of rural economics, such as the cost of transportation, the prices of agricultural products, the wages of farm labor, and the extent to which the principle of cooperation has been applied to different branches of the agricultural industry.

There is an urgent demand from many different directions for a substantial broadening of the scope of the work of this Division. Only the insufficiency of the appropriation prevents the live stock and live-stock products of the country—an interest so enormous that after

satisfying the needs of our own large population there was available last year for export over $250,000,000 worth of its products—from being reported upon as promptly and fully as are the cotton, corn, and wheat crops of the country. The annual fruit crop, the egg and poultry industry, beet sugar, flaxseed, and other products of great and growing importance also claim attention. The Department has already in operation all the agencies necessary to the collection, as often as may be necessary, of the required information relative to these important interests, and all that remains to be done is to provide the means for the employment of such additional experts and statistical compilers as may be necessary to the prompt compilation and analysis of so large an amount of additional statistical data.

Negotiations with the Governments of the principal grain-producing countries of Europe looking to a telegraphic interchange of crop reports are far advanced, and the growing season of 1902 will see the American farmer placed in as prompt possession of reliable statistics concerning the principal grain crops of foreign countries as he is of those of the United States.

For several years past determined efforts have been made, with the cooperation of the Public Printer, to expedite the publication and distribution of the Statistician's crop reports, so that as little time as possible might intervene between the issue of the telegraphic summary, the circulation of which is necessarily chiefly commercial, and the receipt in the most remote agricultural county of the complete report. On May 31, 1901, however, at a time when the keenest interest was prevailing throughout the entire South as to the extent of the newly planted acreage of cotton, a card containing the most important points of the Statistician's report on the subject was mailed to 24,000 Southern post offices within three hours of the publication of the telegraphic summary, with a request that postmasters would give it prominent display in their offices. This was done largely as an experiment, and so successful was it that within a few weeks its operation was extended with the most gratifying results to the grain reports. A farmer has now only to visit the nearest post-office to see the Statistician's latest report on the principal crops, and the measures adopted by the Public Printer and Postmaster-General have reduced to a minimum the time necessary to placing this important information within the farmer's immediate reach.

The remarkable accuracy of the Statistician's advance estimates of the cotton crop in each of the last two years has excited much favorable comment both in the United States and abroad, and his work in general is commended to Congress as worthy of largely increased provision for its further extension and improvement. This Division is growing in usefulness and in the estimation of the people. It is outgrowing its present environment and it will be wise in the near future to give it bureau enlargement.

SALARIES INADEQUATE.

During the remarkable developments in the agriculture and commerce of this country within the past fifteen or twenty years, the Department of Agriculture has steadily improved its personnel, has broadened its work along economic lines, and has contributed not a little to the progress of events and to the building up of domestic and foreign trade. Originally organized as a scientific bureau for acquiring and disseminating among the people useful information, it has solved many problems in animal industry concerning the cause and remedy of disease, has stamped out contagious diseases which threatened to ravage the country, and has kept open foreign markets by its system of rigid and competent inspection; through the Weather Bureau it has aided in saving growing crops and the products of the farm in transit, besides being of inestimable value in its warnings for the benefit of commerce in lake and ocean navigation. It has investigated the proper methods of controlling plant diseases and insect pests. It has studied and classified soils, pointing out their necessities and their values for certain crops, and has introduced new crops and new industries from abroad.

The Department has endeavored to retain the best scientific talent in the country for the investigation of the many problems confronting the agriculturist, in the interest not of pure science but of agricultural and commercial development. Coincident with the growth in the Department's duties, and largely as an outcome of it, numerous institutions have grown up in every State of this country, as well as in foreign lands, devoted to lines of work similar to those pursued in the Department, which may be generally described as the application of science to the service of agriculture. These State and governmental institutions, and the private agricultural interests as well, are now paying salaries for expert services commensurate with those paid in professional and industrial lines. Men with good business training and thorough understanding of agriculture and a fair knowledge of scientific principles and methods are constantly in demand at good prices.

There has never been in the history of the world such a strenuous competition between the different countries for commercial supremacy as exists to-day. Each nation is exerting itself to the utmost to extend its production, so as to supply its own wants and to provide a surplus for exportation. In doing this they are depending more and more upon the aid of science, and are taking advantage of every scientific discovery. The result is that men who combine knowledge with experience and practical ability are difficult to get and are increasingly in demand. In the general conflict between nations it is obvious that that country which has been the most liberal in securing properly equipped organizers of its industry is sure to have the advantage in this commercial strife.

Yet the Department of Agriculture of this country has frequently had to record the loss of men trained in its services, who have been called away to other fields by offers of more generous remuneration. The danger of losing good men has never been so great as at the present time. Last year a foreign government secured one of our tobacco experts at a salary four times what this Department was giving him, and quite recently the papers have announced that the result of investigations made under his auspices are so promising that it is believed the demand for American and other imported tobaccos in that market can be stopped and the requirements supplied by home production. Subsequently an offer was made to another tobacco expert in the employ of this Department at a salary of about three times what he was being paid. This had to be met by an increase in his salary, amounting to one-third more than the chief of the division who was directing the work was allowed by statutory enactment. As an executive act, this was not good policy nor compatible with the best interests of the Department, but the work in hand had to be provided for, pending further action by Congress.

More recently still, advances have been made by several foreign governments to secure the services of some of the leading men of the Department, the chiefs of Bureaus, offering such liberal increases over the salaries paid here that it becomes almost a matter of duty on the part of the men to accept. Such acceptances, if carried out, would not only cost the Department some of its leading men, but would also draw away many of their subordinates who are now in excellent training for valuable work.

It is apparent in reviewing the work of the past fiscal year that the men who have planned and executed the investigations which have been carried on have earned for the country many times over the cost of their salaries and the money appropriated for their use. It is an axiom among business men that the more expensive employees are often the cheapest, by reason of their being most productive. The Department has always been obliged to train its own men, and has only too frequently lost their services when, from their ability to handle large questions, they have been called elsewhere at more remunerative salaries. The Department should not always be in this position of having to train its men in order to get them cheaply, but should be allowed to secure the services of capable men already trained by giving salaries commensurate with the valuable commercial interests to be put in their charge. The loss of time necessary to train men to handle these problems is in itself a serious drawback, and if they are called elsewhere after receiving their training and before they give valuable returns to the Department in the way of productive work, the time and money spent upon their training is largely thrown away.

In view of these facts, I have provided in my estimates for a salary

of $5,000 for the chiefs of the Bureaus in this Department, firmly believing that the men who now occupy these positions are fully deserving of such salaries; that if less is given them they will be called to other countries or to other positions in this country, and that if these men, who have been instrumental in the remarkable development in the work of the Department in recent years, sever their connection with the institution it will be impossible to fill their positions with capable men for anything less than the salaries named. I would urge upon Congress in the strongest terms liberality in this regard, as I believe it to be for the best interests of the country to obtain and retain the best men that can be found for these important positions; and I would also urge this increase in their salaries in order that we may appoint experts at salaries which they can command in commercial lines, and not have to take the humiliating step of paying the experts more than the chief of the bureau who is directing the work, a step which has had to be taken twice already in one of the Bureaus of this Department, in order to secure from the commercial world men competent to maintain the integrity and insure the success of the work that had been undertaken.

The chiefs must direct the special technical education of the students in their lines. If we could look to the universities and colleges of the country for men prepared to do our work in applied sciences relating to agriculture, the loss of an expert chief would not be so serious. From the agricultural colleges we are getting young men and women as scientific aids, who will become valuable investigators and teachers in their specialties after being trained in the Department, but the chiefs who train them are indispensable at present.

Respectfully submitted.

JAMES WILSON,
Secretary.

WASHINGTON, D. C., *November 23, 1901.*

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